# Single-Bid Asphalt Contracts

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**Legislative Oversight And Investigations Committee**

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# Abstract

This report reviews single-bid asphalt contracts as approved by the Kentucky Transportation Cabinet (KYTC). KYTC is exempt from the Model Procurement Code for the procurement of road construction and maintenance services. It contracts for highway construction, improvement, and maintenance projects through its own competitive bidding procedures. In 2022, KYTC awarded approximately $828 million of asphalt projects to contractors. Contractors must prequalify for specific types of work and are given a limit for the amount of KYTC work they can have at one time. As of July 2023, there were 53 contractors registered to bid on asphalt projects. More than 50 percent of asphalt contracted received a single bid, though the likelihood that KYTC would receive a single bid varies by work type. Projects with a single bid were typically awarded at a higher cost relative to cabinet estimates than projects with multiple bidders. Generally, bidding is more competitive in counties surrounding Jefferson County and in northern Kentucky; it is less competitive in the eastern, central, and western regions of the state. Central Kentucky has multiple plants owned by different companies, making its lack of competition unusual. The reasons for uncompetitive market conditions are complex but largely stem from constraints in asphalt production, as well as large startup capital requirements to produce and transport asphalt that disincentivize potential suppliers from entering the market. Because of these constraints, KYTC should

- encourage and enhance competition for asphalt projects where possible by limiting the public disclosure of potential bidders while bidding for projects is open,
- ensure it has internal processes to verify the accuracy of its engineers' estimates,
- develop written guidance on the award or rejection of a bid,
- cease the posting of unit bid prices when all bids for a project are rejected, and
- use procurement software to detect potential collusion.

The report includes three finding areas and six recommendations.

# Foreword

Legislative Oversight and Investigations Committee staff appreciate all those who provided assistance with this report. Foremost, the committee would like to note the cooperation of the Kentucky Transportation Cabinet, without whose assistance this project would not have been possible. Officials from H.G. Mays Corporation provided a tour of its Frankfort asphalt plant and demonstrated the production process. Officials from Mountain Enterprises, Riegler Blacktop, and Scotty's Contracting & Stone provided information on asphalt production, operations, and the market. Staff from the Office of Economic Analysis assisted in reviewing data and producing maps. Staff from the Office of Budget Review and the Interim Joint Committee on Transportation provided additional information.

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Frankfort, Kentucky
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# Summary

The Legislative Oversight and Investigations Committee (LOIC) selected a study of the procurement processes related to asphalt contracts as one of its 2022 study topics. The study reviewed asphalt contracts from January 2018 to July 2023. The Division of Construction Procurement within the Kentucky Transportation Cabinet is responsible for asphalt service procurement. Potential contractors must go through a prequalification process in which the cabinet reviews contractors' financial capacity and experience. Contractors are assigned qualifications and can bid only on projects that meet their qualifications. Contractors typically bid based on the price of project materials. From January 2018 to July 2023, the cabinet let $3.6 billion of asphalt projects, with an average award of $1.4 million.

## Major Conclusions

- Single-bid projects are the most frequent result for asphalt projects awarded by the Kentucky Transportation Cabinet. Projects attracting more than two bidders are rare.
- Projects with a single bid were typically awarded at a higher cost relative to cabinet estimates than projects with multiple bidders, though the difference decreased in 2022 and 2023.
- The number of actual bidders has decreased over time.
- From January 2018 to July 2023, four contractors were awarded more than half of all single-bid contracts.
- Bidding is generally more competitive in counties surrounding Jefferson County and in northern Kentucky; it is less competitive in the eastern, central, and western regions of the state. Counties near Fayette County have a high percentage of single-bid contracts even though multiple plants are located in the region.
- The prevalence of single-bid asphalt contracts can be attributed to Kentucky's asphalt market, which has limited competitiveness due to restrictions in asphalt production, barriers to entry, limited competitors, and varying availability of asphalt plants across the state.
- As of July 2023, six companies owned more than half of all asphalt plants in Kentucky.
- Kentucky's bid review and evaluation processes are generally in compliance with federal guidance and comparable to those of bordering states, but the cabinet has not implemented guidance for the posting of eligible bidders or written procedures for the award or rejection of bids. The cabinet partially follows federal guidance related to publishing the engineer's estimate. Statute requires the estimate be published when bids are opened while federal guidance suggests publishing the estimate when the project is awarded.

## Recommendations

Single-bid projects were common from January 2018 to July 2023 but typically occurred where there were fewer providers of asphalt. However, Fayette County and five surrounding counties had high rates of single-bid contracts despite the presence of five plants owned by four

companies. These single-bid contract rates ranged from 68 percent to 94 percent of contracts. Another bordering county, Woodford, has no single-bid contract rates.

**Recommendation 3.1**

**The Kentucky Transportation Cabinet should monitor single-bid asphalt contracts in central Kentucky, where there are multiple potential contractors for the region. If the pattern continues, the cabinet should contact nonbidding contractors to determine if there is a structural reason why they do not submit bids.**

The cabinet publicly posts a list of potential bidders for each project. Federal guidance recommends that states not publish or release information regarding eligible bidders because it may encourage bid collusion and is less likely to create a competitive bidding environment. The cabinet has indicated that the list of potential bidders is used by subcontractors to offer services to primary contractors.

**Recommendation 3.2**

**Kentucky Transportation Cabinet should transition to keeping plan holder lists confidential or waiting until there are at least three potential bidders on a project before releasing identities of plan holders. The cabinet should provide an option for subcontractors to indicate interest in the project, so primary contractors can identify potential subcontractors.**

Kentucky's engineer's estimate appears to use a method suggested by federal guidance, but staff were unable to verify the actual methods. The engineer's estimate is the cabinet's estimate of project costs and is used to evaluate bids. The cabinet did not want to potentially undermine competitive bidding by releasing the methodology behind its engineer's estimate. Though appropriate, this choice could create the appearance of obfuscation and prevent the cabinet from protecting itself against claims of high or low estimates.

**Recommendation 3.3**

**The Kentucky Transportation Cabinet should ensure it has an internal process to verify its engineer's estimate, to ensure that the estimate accurately represents project costs.**

The cabinet complies with federal guidance on the evaluation of bids but does not have written procedures for justifying the award of contracts or the rejection of bids. Federal guidance recommends that states have written procedures for justifying the award or rejection of bids. The lack of a written policy can create the appearance of arbitrary decisions, even if patterns are evident in the cabinet's actions.

**Recommendation 3.4**

**The Kentucky Transportation Cabinet should develop written guidelines for justifying the award or rejection of a bid. They should indicate when the cabinet can make exceptions and how the exceptions should be documented.**

While reviewing rejected bids, LOIC staff found that the cabinet posted unit bid prices even when all bids were rejected. This practice can undermine competitiveness if the project is rebid, by allowing competitors to tacitly collude or adjust their bids based on known competitor prices. If KYTC cannot establish a valuable reason to provide unit prices after rejecting all bids, it should consider not releasing unit prices, in order to maintain competitive estimates on potential second lettings. This would not prevent the cabinet from communicating why all bids were rejected.

**Recommendation 3.5**

**The Kentucky Transportation Cabinet should cease posting unit bid prices when it rejects all bids on a project, unless it can determine it is in the cabinet's best interest to post the prices.**

Federal guidance stresses that states should make a conscious effort to determine if bid rigging is ongoing or has occurred recently. The guidelines recommend a period of 5 years for the initial evaluation. In a 2017 survey, a majority of states said they use software to detect potential collusion.

**Recommendation 3.6**

**The Kentucky Transportation Cabinet should use procurement software to detect potential collusion. The cabinet should have a policy to provide evidence to authorities if collusion is suspected.**

# Chapter 1

## Single-Bid Asphalt Contracts

**During its August 11, 2022, meeting, the Legislative Oversight and Investigations Committee (LOIC) selected the procurement processes related to asphalt contracts as one of its 2022 study topics.**

During its August 11, 2022, meeting, the Legislative Oversight and Investigations Committee (LOIC) selected the procurement processes related to asphalt contracts as one of its 2022 study topics. LOIC staff's objective was to review the procurement process, compare contract amounts to Kentucky Transportation Cabinet (KYTC) estimates, and review agency policies.

### Major Objectives

**This study had three major objectives.**

This study had three major objectives:

- Review, summarize, and evaluate asphalt contracts procured from FY 2017 to FY 2022 to determine the impact of single-bid contracts.
- Review the processes KYTC uses for asphalt contracting to determine whether policies encourage competitive bidding.
- Review federal guidance and policies from other states to compare against KYTC's policies.

### Major Conclusions

**This study has nine major conclusions.**

This study has nine major conclusions:

- Single-bid projects are the most frequent result for asphalt projects awarded by the Kentucky Transportation Cabinet. There were roughly twice as many contracts with one bidder as with two. Projects attracting more than two bidders are rare.
- Projects with a single bid were typically awarded at a higher cost relative to cabinet estimates than projects with multiple bidders. Projects with two bidders have traditionally been less expensive than those with one bidder, but the difference decreased in 2022 and 2023.
- The number of actual bidders has decreased over time. The state average was 1.9 bidders per project in 2018 and decreased to 1.5 bidders by 2023.
- From January 2018 to July 2023, four contractors were awarded more than half of all single-bid contracts. The remaining single-bid contracts were awarded to 21 other contractors.
- Bidding is generally more competitive in counties surrounding Jefferson County and in northern Kentucky; it is less

competitive in eastern, central, and western Kentucky. Counties near Fayette County have a high percentage of single-bid contracts even though multiple plants are near the region.

- The prevalence of single-bid asphalt contracts can be attributed to Kentucky's asphalt market, which has limited competitiveness due to restrictions in asphalt production, barriers to entry, a limited number of competitors, and varying amounts of asphalt plants across the state.
- As of July 2023, six companies own more than half of all asphalt plants in Kentucky. The remaining plants are owned by 28 other companies.
- Kentucky's bid review and evaluation processes are generally in compliance with federal guidance and comparable to those of bordering states. Kentucky does not follow federal guidance for the posting of eligible bidders, nor does it have written procedures for the award of contracts or the rejection of bids.
- The Transportation Cabinet does not release information on its project estimates, which is a general practice but can create the appearance of obfuscation.

## Methodology

**This study reviewed asphalt contracts let from January 2018 to July 2023.**

This study reviews asphalt contracts let by KYTC from January 2018 to July 2023. A *let* is defined as the posting of a construction project by KYTC to receive bids from contractors. A *letting* is a compilation of projects that have been posted for bids.

Data was requested for all of 2018 to 2022 to show changes across a 5-year period; data for January to June 2023 was requested to provide a current-year update. The primary unit of analysis was awarded contracts. Contracts that were withdrawn, received no bids, or had all bids rejected are not included in most analyses. When projects were let a second time for bids, only the second project was included.

An *asphalt contract* was considered to be any project that required at least one of two asphalt prequalifications. Projects could be included if they had both prequalifications or any other qualifications in addition to asphalt qualifications. KYTC assigns contractors prequalifications to reflect the type of work that contractors may provide. Chapter 2 discusses prequalifications in more detail.

**The list of potential contractors was based on the first list from July of each year. This created a snapshot of competitors across time.**

To calculate the pool of potential bidders across multiple years, LOIC staff constructed a list based on the first list of prequalified contractors from July of each year. The list of contractors can change throughout the year, so a list of all unique contractors would be misleading. The July lists were used to provide a snapshot of contractors to represent a typical point in time. As discussed in Chapter 3, the middle of the year is a busy season for asphalt contractors.

Staff interviewed KYTC officials to understand the cabinet's policies and procedures, and interviewed contractors who won single-bid contracts to better understand the asphalt process and the market. Staff attempted to set interviews with contractors from different regions of the state but could interview only four in time for the report: H.G. Mays, Mountain Enterprises, Riegler Blacktop, and Scotty's Contracting & Stone.

**Kentucky's policies and procedures were compared against those of seven other states.**

Staff reviewed policies and procedures from other states, as a comparison to Kentucky. All bordering states—Illinois, Indiana, Missouri, Ohio, Tennessee, Virginia, and West Virginia—were selected, because their geography is similar to that of Kentucky, which affects construction, and contractors on the border of Kentucky can work in these other states. When a state's publicly posted policies were unclear, staff called its transportation authority and asked clarifying questions.

## Areas For Further Review

During the course of the study, LOIC staff encountered potential areas of interest to the committee that could not be studied in time for the report.

### Auditing Requirements May Be A Barrier

**Auditing requirements may be expensive for new contractors. Further study may be needed to determine whether having an alternative financial guarantee could attract more contractors.**

An increased number of competitors could increase the number of bids on contracts, but the auditing requirements could be a barrier for smaller contractors. To take on more than $1 million of KYTC work, contractors must have their financial documents audited by a certified public accountant.[1] Interviewed contractors stated that smaller companies may have difficulty paying for the audit and may be dissuaded from applying to work with the cabinet, citing potential audit costs of $35,000. They suggested that an alternative bonding requirement may be easier for smaller contractors.[2]

It is unclear whether the auditing requirement is a significant barrier. A review of this suggestion would require data on costs of auditing financial information and, preferably, statements from potential contractors stating it was an issue. Given that the audit could lead to more than $1 million of work, paying for an audit seems like a reasonable investment. The audit also provides the cabinet with more information that may be useful when certifying the bidder. Further review would be needed to determine whether potentially bringing in small contractors is worth the loss of a financial review.

## Recycled Asphalt

**Increased use of recycled asphalt could lead to cost savings and was mentioned by multiple parties. This issue was out of scope of the study.**

If KYTC cannot increase competitiveness in asphalt projects, it may consider methods to decrease the costs of projects. Interviews with contractors suggested that the increased use of recycled materials could decrease costs, and legislators have expressed interest in this change, but this issue was out of scope of the study because recycled materials should not change the prevalence of single-bid contracts.

House Resolution 93 (2023 Regular Session) requested that KYTC study the benefits of increased use of recycled asphalt. Additionally, the resolution requested that the cabinet develop a plan to increase the use of reclaimed asphalt pavement on future road projects.

During the November 1, 2023, meeting of the Interim Joint Committee on Transportation, industry representatives cited sustainability, cost savings, and performance as the benefits of increased use of recycled asphalt.[3] KYTC officials recognized the cost and natural resource benefits of recycled asphalt, but they noted that a 2016 analysis conducted by the cabinet identified performance-related concerns, such as early and accelerated cracking leading to a decreased service life. KYTC is working with industry partners to improve the safety and environmental impact of asphalt pavements. The agenda for this workgroup includes developing best practices for development and increased use of recycled asphalt.[4]

During interviews with LOIC staff, representatives from Mountain Enterprises and Scotty's Contracting & Stone supported the increased use of recycled asphalt in KYTC projects. Per Scotty's Contracting & Stone, increased use of recycled product could make projects more cost effective.[5]

## Structure Of This Report

Chapter 2 describes how asphalt is mixed and provides an overview of the asphalt procurement process. It indicates how contractors become qualified to bid on KYTC projects and how they bid on individual projects. The chapter describes how bids are reviewed and provides a summary of all asphalt projects from January 2018 to July 2023.

Chapter 3 presents three finding areas and six recommendations. The first finding area focuses on the prevalence and effect of single-bid contracts by providing summaries of where they are most common and how awarded bids have differed from the cabinet's estimates. The second area discusses the competitiveness of asphalt services in Kentucky by looking at inherent problems with asphalt production, the number of producers, and the regional supply of producers. The final finding area evaluates KYTC's policies by comparing them against federal guidance and policies of bordering states.

# Chapter 2

## Asphalt Contracting Background

### Overview Of Asphalt Pavement

**Asphalt pavement is a composite material composed of liquid asphalt cement and natural or processed aggregates. Asphalt mixtures undergo quality control tests to ensure compliance with specifications. Asphalt is laid down by a paving machine and compacted with steel-wheel rollers to achieve the correct density.**

Asphalt pavement, used primarily for surfacing roads, is a composite material composed of liquid asphalt cement (binder) and aggregates such as natural materials (river gravel and sands) or materials processed from quarries. The liquid asphalt acts as a glue that binds the aggregates, which provide structure and strength. The mix of these components varies depending on the asphalt's application and the client's requirements. For state contracts, asphalt mixtures undergo quality control tests to ensure compliance with specifications, and most asphalt plants have on-site laboratories for this purpose. After the required blend of asphalt and aggregates is processed at an asphalt plant, the hot asphalt is loaded onto dump trucks, delivered to the project site, laid down by a paving machine, and compacted with steel-wheel rollers to achieve the correct density.[6]

### Asphalt Plants

**Asphalt production requires a plant to process the correct mix. The plants are capital intensive, requiring at least $5 million. Asphalt plants are often situated near aggregate sources.**

Asphalt production requires a plant to process the correct mix of liquid asphalt cement and aggregate to create hot asphalt for transport to job sites. Plants must sort and store aggregates by size to create the correct mixture. They then process aggregates in heated drums, and store the finished asphalt mix in silos. Asphalt plants are capital-intensive, with startup costs estimated to be at least $5 million, not including additional costs for permits and access to aggregates. Controlling most or all supply chain components—such as aggregate sourcing, hot asphalt production, and transportation—is generally considered economically advantageous for suppliers to contain long-term average costs. Asphalt plants are often situated next to an aggregate source such as an underground quarry or surface mine. Some companies operate their own quarries, and others source aggregates from elsewhere or lease a plant and/or quarry. Companies may also establish mobile plant operations near a job site if economically feasible.[7]

Due to the constraints of transporting hot asphalt to job sites, asphalt plants have a limited service area. Hot mix asphalt must be applied before it cools and becomes too rigid to spread and compact properly. Under KYTC standard specifications for

different mixes, asphalt is produced at a maximum temperature of 330°F to 350°F and must arrive at the job site before cooling below 210°F to 310°F, depending on the asphalt mix.[8] Factors such as ambient temperature, moisture, and other environmental conditions can influence the rate at which hot asphalt cools, but it is generally estimated that asphalt can be transported for a maximum of 45 to 60 minutes before it risks cooling excessively.[9] This limitation motivates companies to operate multiple plants if the market within a single plant's service area is insufficient to sustain their business.

## KYTC Bidding Process

**The Kentucky Transportation Cabinet (KYTC) is exempt from the Model Procurement Code. The Division of Construction Procurement is responsible for contracting for asphalt projects.**

Executive branch procurement is typically restricted by the Model Procurement Code (KRS Chapter 45A) and overseen or administered by the Finance and Administration Cabinet (FAC). However, KRS 45A.050 provides the statutory exemption for the KYTC Department of Highways to procure services for the construction and maintenance of roads outside of FAC direction. Requirements for the Department of Highways' competitive bidding procedure are established in KRS Chapter 176 and 603 KAR 2:015. Procurement policy is further outlined in the Division of Construction Procurement's *Construction Procurement Guidance Manual* and the Division of Construction's *Standard Specifications*.

KYTC contracts for highway construction, improvement, and maintenance projects through the Division of Construction Procurement. The Division of Construction Procurement is housed in the Office of Project Delivery and Preservation within the Department of Highways.

The Division of Construction Procurement is managed by a division director and contains three branches that administer the procurement process:

- The Prequalification and Compliance Branch ensures that potential bidders possess a certificate of eligibility.
- The Plans, Specifications, and Estimates Branch reviews plans and specifications to prepare an engineer's estimate for each project in a bid letting.
- The Advertising, Proposals and Awards Branch advertises the letting, builds the proposals, and follows projects through the contract process until work orders are complete.[10]

## Prequalification

**To bid on a KYTC project, contractors must receive a certificate of eligibility through the prequalification process, which allows KYTC to review the capabilities of the contractor, authorize it to work on specific types of projects, and set the maximum amount of work it may have at one time.**

Any contractor bidding on a construction or maintenance project with KYTC must first be prequalified and possess a certificate of eligibility, issued by the department.[11] This certificate confirms the contractor's qualifications and the maximum dollar amount it is authorized to bid. Applicants may submit new applications if dissatisfied with the amount of work they have been permitted.[12] Contractors authorized to work on $150 million of KYTC work can request to take on an unlimited amount of projects.[13]

The prequalification review is conducted by the Construction Prequalification Committee, a body staffed by department employees appointed by the commissioner of highways. This committee evaluates each contractor's application, which includes assessing the applicant's resources, experience, and past project performance.[14]

Contractors must submit an application to demonstrate their capability to undertake the types of work for which they seek eligibility. The work types for which they may be qualified are given distinct classifications. For asphalt work, there are two relevant classifications certifying that a contractor can perform asphalt paving work; C1 certifies work on lower-volume roadways, and C2 certifies work on higher-volume roadways such as interstates and parkways. Asphalt projects may have multiple work categories in their prequalification requirements; KYTC uses 204 categories. Contractors must be prequalified for all work types in a project before bidding.

**The prequalification process requires the contractor to submit résumés of officers and staff, a description of equipment and facilities, and financial statements. To take on more than $1 million of work, the contractor must be audited by a certified public accountant.**

The prequalification application requires the résumés of principal officers and key staff, a description of equipment and facilities, and financial statements. If the contractor wishes to take on more than $1 million of work for the cabinet, the financial documents require an audit by a certified public accountant. A contractor's eligibility is calculated with a formulaic approach in which the department considers net assets, equipment values, and a percentage rating that reflects the contractor's organizational structure, experience, equipment, and past performance. The sum of these calculations determines the maximum amount for which a contractor can bid. After the committee's review, the state highway engineer has 30 days to issue a decision on eligibility.[15]

**Certificates expires 120 days after the end of the contractor's fiscal year. Certificates may be suspended, revoked, or reduced if the contractor fails to comply with laws, regulations, or contract specifications.**

Certificates expire 120 calendar days after the end of the contractor's fiscal year. Contractors must submit a new application within 90 calendar days of the end of their fiscal year. Certificates can be suspended, revoked, or reduced in eligibility upon receipt of evidence that the contractor has failed to comply with laws, administrative regulations, or contract specifications.[16]

## Bidding Process

**KYTC conducts monthly lettings through competitive bidding. It releases 4-month letting schedules detailing projects.**

KYTC conducts monthly lettings for highway construction and maintenance projects through competitive bidding, with the schedule set before the beginning of each year. Specific projects are not named in the annual letting schedule. KYTC releases 4-month letting schedules detailing specific projects, but a contractor noted that these often exclude the most common asphalt projects.[17]

**Projects must be advertised at least once in a leading statewide newspaper and on the KYTC website. Lettings provide specific instructions on a project and the needed prequalifications. Contractors compete based purely on the price of individual materials.**

Projects in the cabinet's monthly letting are advertised at least once in a leading statewide newspaper and on the KYTC website. Federal-aid projects must be advertised at least 21 days before bids are opened, and state-funded projects require at least 7 days' notice.[18] The letting information on the KYTC website includes detailed proposals for each project, encompassing lists of bid items, location data, specifications, scope of work, and standard employment, wage, and record requirements. The letting also specifies the prequalifications required for contractors to bid. Contractors may not deviate from contract requirements unless they obtain written authority from KYTC.[19] The letting information has detailed instructions on how to complete each project, making component prices the only differentiation between contractors.

**Contractors must indicate intent to bid on a project by 3 p.m. of the day before bidding closes. KYTC publishes a list of registered contractors for each project.**

Contractors intending to bid must register with the Cabinet by submitting a Bidder Registration form, listing all projects they plan to bid on in that month's letting. Registration forms are accepted until 3 p.m. on the day before the letting.[20] KYTC publishes a list of all registered contractors for each project, which is periodically updated before bidding closes, to facilitate communication between bidders and potential subcontractors. Qualified bidders submit their bids through BidX, an online bidding platform. Contractors submit bids with prices for each unit of material in the project.

**An engineer's estimate is prepared for each project and assists in evaluating bids. The estimate is intended as a reasonable assessment of the project's costs. Estimates are published after bids are opened.**

The Plans, Specifications, and Estimates Branch prepares an engineer's estimate for each project prior to each bid letting. This estimate is intended as a fair and reasonable assessment of the project's current costs, including materials, labor, equipment, overhead, and profit.[21] Although KYTC states that estimates may be derived using "[c]ost-based, historical price-based, and/or hybrid" methods, the estimate methodology and any engineer's estimates before the letting are strictly confidential unless release is authorized in writing by the state highway engineer and the Office of Legal Services. Estimates for each project are published after bids are opened, but unit prices remain confidential unless release is similarly authorized.[22]

Bids on projects must be publicly opened at the time and place designated in the invitation to bid. When the bids are opened, the department announces the engineer's estimate. Bids and the engineer's estimates are recorded and open to public inspection.[23] In practice, the lettings on KYTC's website are updated after a vendor has been selected to show the bids from each contractor and the engineer's estimate.

**Unless all bids are rejected, the contract is awarded to the lowest responsive bidder. The current guidance gives broad leeway to reject bids.**

After the bids are opened, the Plans, Specifications, and Estimates Branch reviews and analyzes them, comparing the total bid amounts to the engineer's estimate. There is limited guidance on when KYTC considers all submitted bids worthy of rejection, and existing guidance provides broad leeway to reject bids not in the cabinet's perceived interest. Although the Division of Construction's Standard Specifications give specific conditions under which "irregular" bids may be rejected, the specifications also state that the Department of Highways "reserves the right to reject any or all Bid Proposals … if doing so is in the best interest of the Commonwealth."[24] From 2018 to 2023, KYTC rejected all bids for 15.2 percent of all asphalt-related projects. The cabinet has stated that in most cases a project is readvertised if all bids are rejected; otherwise, the contract is awarded to the lowest responsive bidder.[25]

**From January 2018 to July 2023, KYTC awarded 2,539 asphalt projects. The average contract amount increased in 2022 and 2023.**

From January 2018 to July 2023, KYTC awarded 2,539 asphalt projects to eligible bidders. The annual total for these projects ranged from $328 million in 2020 to almost $828 million in 2022. The average awarded contract was relatively stable from 2018 to 2021, between $1.23 million and $1.37 million. Since then, the average has been significantly greater, $1.64 million in 2022 and $1.68 million in 2023. Table 2.1 lists annual totals and averages of awarded contracts and engineer's estimates, as well as the total number of awarded contracts.

**Table 2.1**
**Value Of Asphalt Contracts Awarded (In Millions)**
**January 2018 To July 2023**

| Year | Number Of Contracts | Total Award | Total Engineer's Estimate | Average Award | Average Engineer's Estimate |
|---|---|---|---|---|---|
| 2018 | 468 | $575.0 | $608.1 | $1.2 | $1.3 |
| 2019 | 467 | 608.8 | 623.8 | 1.3 | 1.3 |
| 2020 | 239 | 328.3 | 359.4 | 1.4 | 1.5 |
| 2021 | 536 | 684.8 | 715.2 | 1.3 | 1.3 |
| 2022 | 505 | 827.8 | 836.9 | 1.6 | 1.7 |
| 2023 | 324 | 545.2 | 547.4 | 1.7 | 1.7 |
| Total | 2,539 | $3,569.9 | $3,690.8 | $1.4 | $1.5 |

Source: Staff analysis of data from Kentucky Transportation Cabinet.

## Quality Evaluation

**Prior work quality is considered during the prequalification process. Work quality during the project is evaluated through sampling and testing of material.**

Work quality is incentivized during the prequalification process and reviewed after a project is completed. During the prequalification process, a contractor's maximum project eligibility is determined by multiplying a combined financial capacity of the contractor by a percentage rating. Prior performance comprises 50 percent of the percentage rating, such that poor performance on prior jobs will decrease the amount of work the contractor can obtain.[26]

Road work is reviewed through the Quality Assurance Program, which ensures that materials and workmanship conform with approved plans and specifications. For asphalt aggregates, quality samples are required for every 50,000 tons of mixtures for coarse aggregate or for every 75,000 tons of fine aggregate. For asphalt mixtures, KYTC personnel verify the contractor's sampling and testing of the mixture. Contracts specify one of two compaction tests used by the cabinet to verify the density of the asphalt mixture. Additional tests are then conducted based on the type of asphalt. For example, Superpave asphalt requires density testing of samples from six locations in the project.[27]

The Quality Assurance Branch of KYTC also selects some projects for additional review through its Post Construction Review Program. KYTC staff select two to four projects per year for each highway district for evaluation. These projects have generally been open to traffic for a year and cost more than $1 million. KYTC staff host a meeting with participants involved in the design and construction of the project and discuss issues and solutions that could be relevant for future projects.[28]

## Audits

**KYTC has an auditing function, but there has been no audit of asphalt bidding.**

Although KYTC has audited its asphalt contracts, there have been no audits of the bidding portion of the process. KYTC has an Office of Audits that conducts internal, external, and contract audits. Audits relevant to asphalt contracting are done through the Internal Audit Branch and Contract Audit Branch. The Internal Audit Branch primarily evaluates the cabinet's internal control structure, compliance with policies and procedures, and the reliability of financial information. The Contract Audit Branch monitors contract expenditures to ensure that both the contractor and the cabinet have complied with contract terms, state and federal laws and regulations, and other cabinet policies and procedures.[29]

Between its formation in 2013 and November 7, 2022, the Contract Audit Branch conducted 12 audits related to asphalt.[30] Each audit investigated a single contract and its primary contractor to verify that proper procurement procedures were followed, that adequate monitoring of construction was performed, and that any relevant federal and state regulations were followed. In addition to findings showing contractors' lack of compliance with the terms of the contract and other state and federal requirements, the audits noted areas where the cabinet failed to meet requirements. Instances of cabinet noncompliance related to incorrect vendor monitoring and payment procedures, and all of the findings were relevant only to the construction and closeout phases of the contract and not to the bidding and award phases.

Annual audit plans published by the Internal Audit Branch since 2012 examined internal control policies and procedures that indirectly related to asphalt contracts. The topics covered in these reports similarly focused on the construction and close-out phases of contract administration as opposed to the bidding and awarding of contracts. In reports examined by LOIC staff, no findings related more generally to asphalt-related projects or highway construction projects.

## Past Allegations Of Bid Rigging

**There is one known case of bid rigging related to state asphalt paving, and a separate indictment. In 1983, the owner of Mountain Enterprises pleaded guilty, and Mountain Enterprises was convicted along with Nally & Gibson.**

There is one known case of bid rigging related to state asphalt paving, as well as a separate indictment. As a result of a wide-ranging investigation into bid rigging for highway contracts, the owner of Mountain Enterprises pleaded guilty in 1983 to federal antitrust charges that accused the company of bid rigging for state paving contracts. The investigation led

to federal felony convictions against Mountain Enterprises, which was fined $150,000 as well as $112,000 in restitution and damages to the state. In addition, Nally & Gibson was fined $300,000, and its president was fined $50,000 and ordered to perform 120 hours of community service.[31]

**Contractors would meet before bidding opened and divide the projects. A contractor would submit a bid that added 15 percent to 20 percent profit. A second contractor would submit a slightly higher bid to give the appearance of competition.**

The transcript of the prosecutors' 1983 interview with the Mountain Enterprises owner, unreleased to the public until 2014, described how he and other highway contractors colluded to maximize profits on highway construction contracts without facing competitive bids. Contractors would meet before KYTC opened bidding on road projects and divide them among themselves. A contractor would submit a project bid that added 15 percent to 20 percent in profit, and another contractor would submit a complementary bid that was 2 percent to 3 percent higher in order to give the appearance of competition. Contractors typically agreed on noncompetitive territories based on the location of their business operations. In exchange for cooperating with prosecutors, Mountain Enterprises avoided any suspension from bidding on projects.[32]

**In 2008, the Mountain Enterprises owner was indicted for bid rigging. He was alleged to have bribed the transportation secretary to gain access to bid estimates. A jury found the defendants not guilty.**

In 2008, the Mountain Enterprises owner was again accused of bid rigging and was indicted along with a former Transportation Secretary and the secretary's aide on charges related to bribery, theft, conspiracy, and obstruction of justice. The prosecution alleged that the owner had bribed the secretary in exchange for the release of confidential bid estimates for projects worth $130 million.[33] The prosecution relied largely on the testimony of a former deputy state highway engineer, who testified that the secretary had told him to take bid estimates to the owner in exchange for $20,000 in bribes.[34] However, the prosecution could not offer concrete evidence directly linking the owner and the secretary to the bid estimates or alleged bribes, and a jury found the two not guilty of all charges. Charges against the secretary's aide were later dropped.[35]

# Chapter 3

## Findings And Recommendations

This review of single-bid asphalt contracts resulted in three finding areas based on research areas and six recommendations.

### How Common Are Single-Bid Contracts, And Where Do They Most Affect Procurement?

**LOIC staff analyzed data on all bids for asphalt construction projects let from January 2018 to July 2023.**

LOIC staff analyzed KYTC data on all bids for asphalt construction projects let from January 2018 to July 2023. The objective of this analysis was to determine the number of projects that are awarded to a single bidder and investigate mitigating factors that may prevent multiple bidders from bidding on these projects. Single-bid awards raise concerns due to the potential for reduced competition, which may increase costs for asphalt projects overseen by KYTC.

**Single-bid projects are the most frequent result for asphalt projects. Projects with more than two bidders are rare.**

Single-bid projects are the most frequent result for asphalt projects awarded by the cabinet. Projects attracting more than two bidders are rare, having declined from 27.4 percent of total awarded projects in 2018 to 9.6 percent in 2023. During the same period, the proportion of asphalt contracts awarded to a sole bidder increased from 45.5 percent to 63.3 percent.

**The economic impact of limited bidders is inconsistent, with a more significant impact from 2018 to 2021 than in 2022 and 2023. This change is tied more to an increase in awarded costs for two-bidder contracts than the cost of single-bid contracts.**

The economic impact of limited bidders on asphalt contracts has been inconsistent. From 2018 to 2023, single-bid contracts were awarded at 100.5 percent of the engineer's estimate, while contracts with two bidders were awarded at 93.5 percent of the engineer's estimate. The difference suggests a link between the number of bidders and the project's awarded cost to the state. However, the strength of this link has decreased over time; it was more significant between 2018 and 2021 than in 2022 and 2023. This trend is attributed more to an increase in the awarded costs for projects with two bidders than to a change in the costs of single-bid awards.

**Single-bid awards are more prevalent in certain regions of the state. Rural areas typically have more single-bid awards, though the region of Fayette and surrounding counties has a high rate.**

The growing tendency for single-bid contracts can be attributed to complex factors, including local geographic and economic conditions. Staff analysis indicates that single-bid awards are much more prevalent in certain regions of the state. The primary distinction appears to be between urban and rural areas: densely populated areas with more roads tend to have more asphalt projects

concentrated in a smaller area. This supports a greater number of providers, which in turn increases the likelihood of receiving multiple bids for projects. For example, Highway District 5 encompasses Jefferson County and surrounding counties, and only 11.1 percent of its awarded asphalt projects had a single bidder from 2018 to 2023. Similarly, Highway District 6 includes the northern Kentucky metropolitan area, and its single-bid rate was 14.2 percent. However, this trend does not extend to Highway District 7; it covers Fayette and surrounding counties, and a higher 65.7 percent of its projects were awarded to single bidders.

## Data And Methodology

Lettings for asphalt contracts from January 2018 to July 2023 were analyzed to identify characteristics of single-bid contracts. The dataset contains information on project work type, location, required bidder qualifications, engineer's estimate, number of bidders, and low bid amount.

**Asphalt projects are defined as projects that require C1 or C2 prequalifications. C1 qualifications are for paving roadways with lower volumes. C2 qualifications are for paving roadways with higher volumes.**

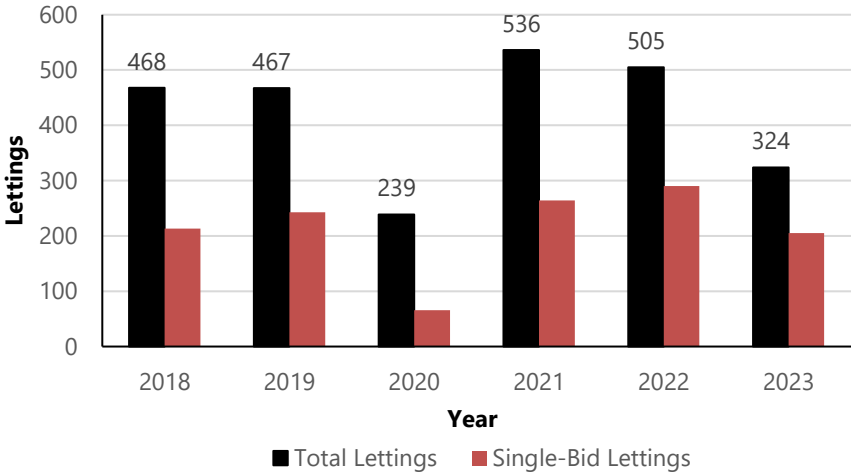
For this analysis, *asphalt projects* are projects from KYTC that stipulated that contractors have a C1 or C2 prequalification. These prequalifications certify that a contractor can pave roadways with lower volumes (C1) or with higher volumes (C2), such as interstates and parkways.[36] Any project that involves asphalt paving will require at least one of the two prequalifications. However, KYTC has stated that some projects required a C1 or C2 prequalification mistakenly and did not actually require asphalt work.[37] These projects were excluded from the analysis.

## Single-Bid Contracts

**Excluding 2020, the percentage of single-bid contracts rose from 45.5 percent in 2018 to 63.3 percent in 2023.**

Figure 3.A shows the number of awarded asphalt-related projects and projects awarded to a single bidder by year. Excluding 2020, the percentage of awarded projects that received only one bid generally rose steadily year over year, from 45.5 percent in 2018 to 63.3 percent in 2023. Table B.1 in Appendix B shows counts and percentages by year.

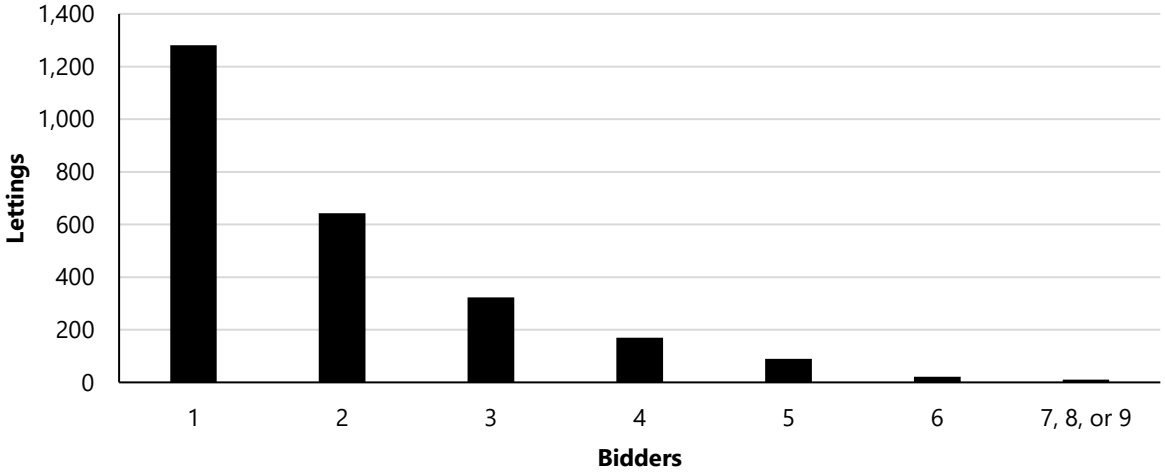
**Figure 3.A**
**Awarded Single-Bid Asphalt Projects, By Year**
**January 2018 To July 2023**




Source: Staff analysis of Kentucky Transportation Cabinet letting data.

Figure 3.B shows the number of awarded asphalt paving contracts by the number of bidders that competed for the contract. Only projects that were awarded to a vendor are included, so any rejected, withdrawn, or no-bid projects are excluded. Table B.2 in Appendix B shows counts by year.

**Figure 3.B**
**Number Of Awarded Asphalt-Related Contracts, By Number Of Bidders**
**January 2018 To July 2023**




Note: Categories for seven, eight, or nine bidders were combined to make them visible on the graph. There were six awarded projects with seven bidders, three with eight bidders, and two with nine bidders.
Source: Staff analysis of Kentucky Transportation Cabinet letting data.

**Contracts bid on by one contractor were the most common, with twice as many contracts as those bid on by two contractors.**

Contracts bid on by one contractor were the most common out of any number of bidders. There were roughly twice as many contracts with one bidder as those with two bidders. This trend continues as the number of bidders increases, with the number of awarded contracts declining by about half with each additional bidder. This pattern may occur because markets with a high number of potential bidders are confined to certain areas of the state.

Table 3.1 shows bid characteristics on awarded contracts of the eight most common contract work types that require a C1 or C2 certification, which collectively represent 96.2 percent of total awarded contracts between 2018 and 2023. Contract work types are selected by a project manager when creating a project but are not formally defined by the cabinet.[38] These work types are generally an approximation of the type of work required, and different work types may be associated with various percentages of work that are directly involved in asphalt paving.[39]

**Table 3.1**
**Characteristics Of Awarded Asphalt-Related Projects, By Work Type**
**January 2018 To July 2023**

| Work Category | Awarded Contracts | Average Number Of Bids | Number Of Single Bids | % Single Bid |
|---|---|---|---|---|
| Asphalt resurfacing | 1,856 | 1.7 | 1,055 | 56.8% |
| Pavement with alternates | 268 | 3.6 | 7 | 2.6 |
| Asphalt pavement and roadway rehab | 95 | 1.5 | 57 | 60.0 |
| Asphalt surface with grade and drain | 78 | 1.6 | 50 | 64.1 |
| Grade and drain with asphalt surface | 78 | 2.2 | 29 | 37.2 |
| Asphalt rehab interstate/parkway | 42 | 1.5 | 24 | 57.1 |
| Asphalt surfacing, ultra thin | 27 | 2.0 | 11 | 40.7 |
| All others | 95 | 2.0 | 48 | 50.5 |
| Total | 2,539 | 1.9 | 1,281 | 50.5% |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

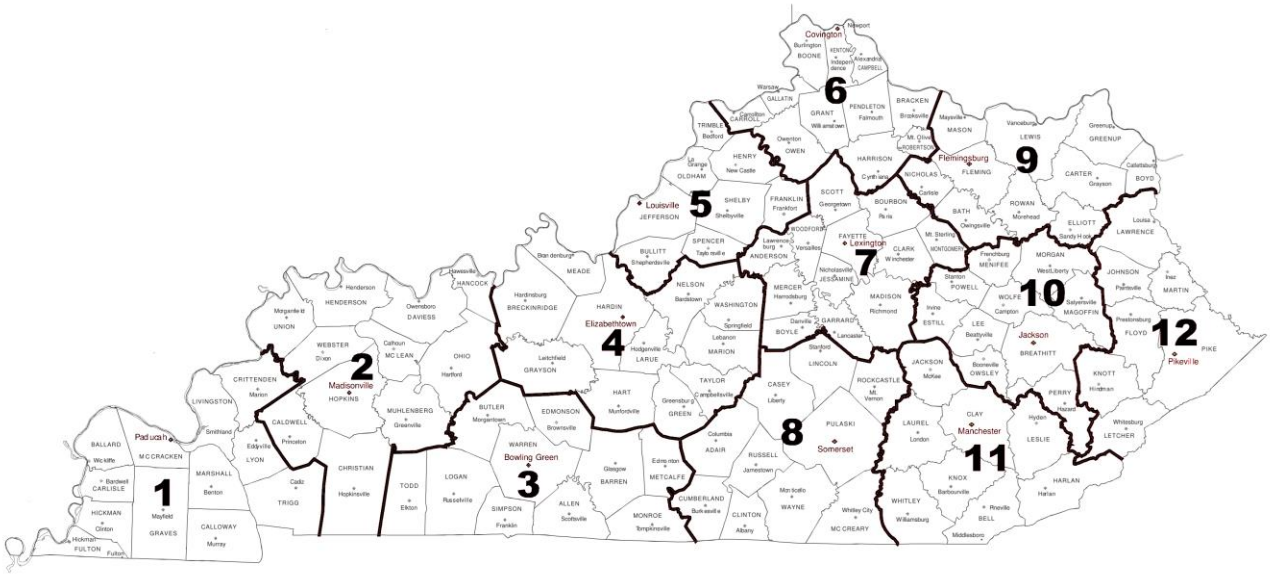
**Most contracts, 73.1 percent, were for asphalt resurfacing. Over half of these had a single bidder.**

Most awarded contracts from 2018 to 2023 were for asphalt resurfacing, which are projects related only to asphalt paving and requiring no additional qualifications from potential bidders. Asphalt resurfacing projects represented 73.1 percent of total awarded contracts; the next most common type (pavement with alternates) made up 10.6 percent of the total. Asphalt resurfacing generally requires only a C1 or C2 prequalification. The main difference between these two work types is pavement (with alternates) projects' high number of average bidders and low number of single-bid projects compared to asphalt resurfacing projects. There was one bidder for 56.8 percent of awarded asphalt resurfacing projects, which is in line with other work categories.

However, only 2.6 percent of pavement (with alternates) projects had a single bidder.

The prevalence of single-bid awards depends largely on regional and local conditions that influence the number and capacity of asphalt providers, so it is useful to compare single-bid awards among the state's 12 highway districts, which are administrative groupings of counties that oversee construction and maintenance of highways in their respective counties. Figure 3.C shows the borders of each district.

**Figure 3.C**
**Map Of Kentucky Transportation Cabinet Highway Districts**



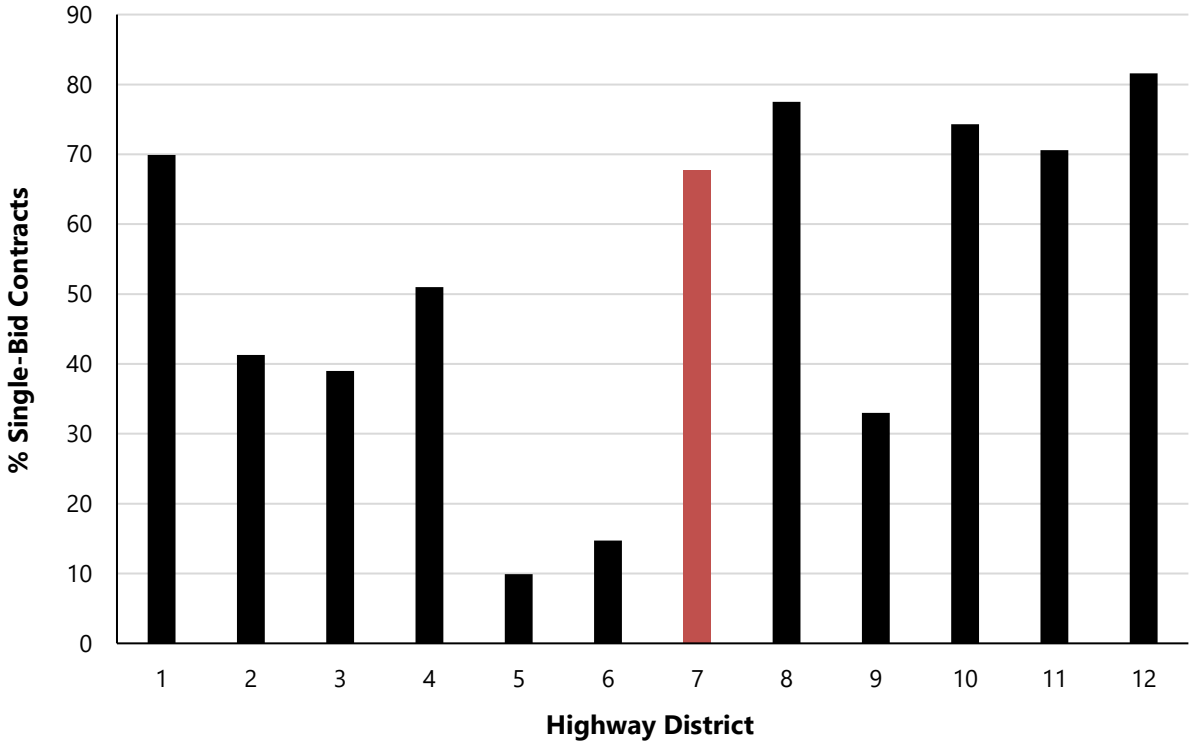

Source: Kentucky Transportation Cabinet.

**Highway districts with a higher population density generally have fewer single-bid contracts. An exception is district 7, which encompasses Fayette County and surrounding counties.**

Figure 3.D shows the percentage of awarded asphalt-related projects with only one bidder by highway district. Table B.3 in Appendix B shows counts by year. Districts with a higher population density generally have a lower percentage of single-bid contracts, and districts with a lower population density generally have more contracts with single bidders. For example, district 5, which encompasses Jefferson County and surrounding counties, and district 6, which encompasses northern Kentucky, both have a lower percentage of projects awarded to single bidders, likely because they are in dense, urban areas with many potential bidders. By comparison, districts 8 through 12, which encompass the eastern portion of the state, likely have more projects awarded to single bidders because they are in rural areas with fewer potential bidders. Road networks in these areas are also less dense, complicating the transporting of materials. An exception

to this trend is district 7, which encompasses Fayette and surrounding counties. Though this is a relatively urban district, the percentage of awards that go to single bidders is higher than in districts 5 and 6.

**Figure 3.D**
**Percentage Of Single Bids On Awarded Asphalt-Related Projects, By Highway District**
**January 2018 To July 2023**




Note: The bar for District 7 indicates a region with unusually high rates of single-bid contracts, given potential competitors.
Source: Staff analysis of Kentucky Transportation Cabinet letting data.

**Awarded bids as a percentage of the engineer's estimate tend to decrease as the number of bidders increases. However, the ratio for projects with two bidders approached the ratio for single-bid contracts in 2022.**

Table 3.2 shows the ratio of the sum of all awarded bids to the sum of all engineer's estimates for projects that were awarded to a lowest, best bidder. Ratios are sorted by year and the number of contractors that bid on a project. In general, there is an apparent relationship between the number of bidders and the amount of the winning bid relative to the engineer's estimate. Single-bid contracts generally cost more, but the amount of the winning bid decreases when one or more bidders participate. In 2022, however, the ratio for contracts with two bidders increased and approached the ratio for single-bid contracts. In the aggregate the ratio is under 100 percent every year; despite the difference in cost between single-bid and multiple-bid contracts, KYTC generally awards asphalt projects for less than the cost at which they are estimated.

**Table 3.2**
**Ratio Of Awarded Amount To Engineer's Estimate, By Number Of Bidders**
**January 2018 To July 2023**

| Number Of Bidders | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Average |
|---|---|---|---|---|---|---|---|
| 1 | 100.1% | 100.9% | 97.5% | 101.2% | 101.3% | 99.4% | 100.5% |
| 2 | 88.6 | 93.9 | 88.2 | 88.7 | 98.9 | 101.4 | 93.5 |
| 3 | 92.3 | 89.3 | 90.9 | 92.9 | 94.4 | 100.9 | 93.2 |
| 4 | 86.1 | 88.4 | 88.6 | 104.0 | 92.8 | 77.6 | 92.1 |
| 5 | 83.3 | 91.7 | 89.9 | 86.3 | 84.4 | 77.6 | 87.0 |
| 6 | 98.2 | 88.1 | 93.9 | 83.1 | 71.3 | 73.4 | 93.1 |
| 7 | 69.1 | 65.4 | 87.9 | 99.5 | N/A | N/A | 89.4 |
| 8 | N/A | N/A | 83.6 | N/A | N/A | N/A | 83.6 |
| 9 | N/A | N/A | 86.4 | N/A | N/A | N/A | 86.4 |
| Average | 94.6% | 97.6% | 91.4% | 95.8% | 98.9% | 99.6% | 96.7% |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

Table 3.3 shows the overall ratio of single-bid and multiple-bid contracts to the engineer's estimates by region and year. For this analysis, regions comprise highway districts, where districts 1 through 4 compose the West region, districts 5 through 7 compose the Central region, and districts 8 through 12 compose the East region. In all three regions, single-bid awards remain more costly relative to the engineer's estimate than awards that received more than one bid, though there are variations by region. In the West, single-bid awards are more costly than multiple-bid awards, but single-bid awards are still generally less than their estimated cost. In the East and Central regions, single-bid awards are consistently more costly than multiple-bid awards and largely higher than their estimated cost, though a higher percentage of awarded asphalt contracts in the East have only one bidder. Statewide, the cabinet awarded single-bid contracts at 100.5 percent of total estimated cost and awarded contracts with multiple bidders at 92.7 percent of total estimated cost.

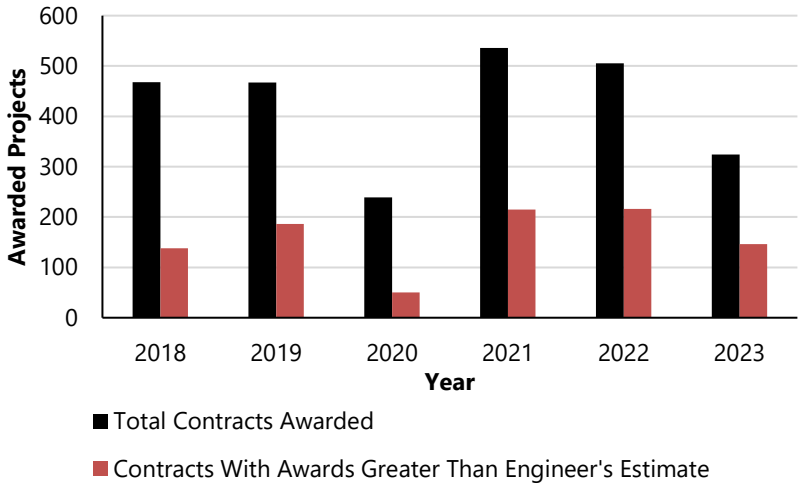
**Table 3.3**
**Ratio Of Single- And Multiple-Bid Awarded Amount To Engineer's Estimate, By Region**
**January 2018 To July 2023**

| | Central | | East | | West | | Statewide | |
|---|---|---|---|---|---|---|---|---|
| Year | Single | Multiple | Single | Multiple | Single | Multiple | Single | Multiple |
| 2018 | 104.3% | 90.2% | 100.6% | 87.5% | 96.0% | 87.9% | 100.1% | 89.0% |
| 2019 | 98.5 | 92.2 | 102.4 | 93.8 | 97.8 | 91.4 | 100.9 | 92.0 |
| 2020 | 100.4 | 93.7 | 101.2 | 90.3 | 93.4 | 87.7 | 97.0 | 89.6 |
| 2021 | 104.5 | 89.6 | 102.6 | 100.4 | 98.8 | 88.7 | 101.2 | 91.9 |
| 2022 | 100.4 | 98.5 | 103.8 | 91.6 | 99.8 | 99.8 | 101.3 | 96.0 |
| 2023 | 102.4 | 101.5 | 96.2 | 89.2 | 100.6 | 103.4 | 99.4 | 99.9 |
| Average | 101.5% | 94.0% | 101.2% | 92.9% | 98.6% | 91.4% | 100.5% | 92.7% |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

Figure 3.E shows the number of awarded asphalt-related projects that exceeded the state's engineer's estimate. Excluding 2020, the percentage of projects awarded at an amount above the engineer's estimates rose year over year, from 29.5 percent in 2018 to 45.1 percent in 2023. Over that period, the total amount of awarded contracts ($3.57 billion) was over $120 million less than the total of all engineer's estimates ($3.69 billion). Tables B.5 and B.6 in Appendix B show counts and contract amounts by year.

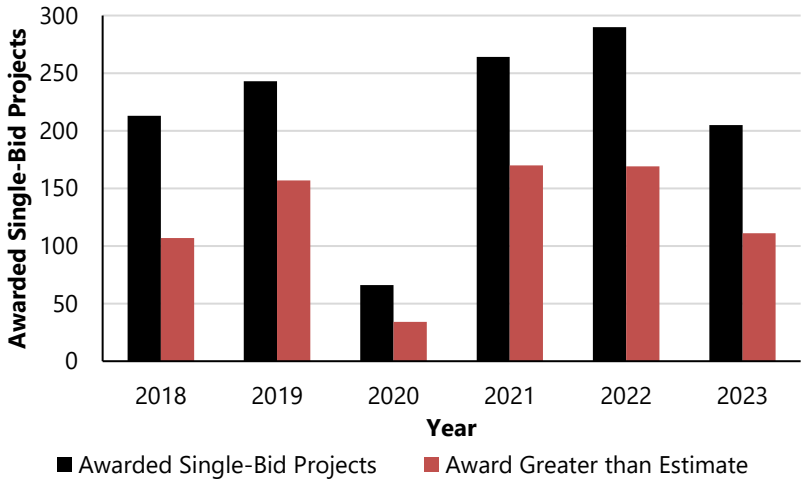
**Figure 3.E**
**Awarded Asphalt Projects Over Engineer's Estimates, By Year**
**January 2018 To July 2023**




Source: Staff analysis of Kentucky Transportation Cabinet letting data.

Figure 3.F shows the number of awarded asphalt-related projects with a single bidder that exceeded the state's engineer's estimate. Nearly 60 percent of all projects with a single bidder were awarded at an amount above the engineer's estimate. Over that period, the total amount of single-bid awarded contracts ($1.91 billion) exceeded the total of all engineer's estimates (nearly $1.90 billion) by $9.51 million. Tables B.6 and B.7 in Appendix B show contract counts and dollar amounts by year.

**Figure 3.F**
**Awarded Single-Bid Asphalt Projects Over Engineer's Estimates, By Year**
**January 2018 To July 2023**




Source: Staff analysis of Kentucky Transportation Cabinet letting data.

## How Competitive Is The Kentucky Asphalt Market?

**The prevalence of single-bid asphalt contracts could be attributed to Kentucky's market. The market has limited competitiveness due to restrictions in production, a limited number of producers, and the locations of plants.**

The prevalence of single-bid asphalt contracts could be attributed to Kentucky's market. Kentucky's asphalt market has limited competitiveness due to restrictions in asphalt production, a limited number of producers, and the locations of asphalt plants in the state. Asphalt can be transported only a short distance before it becomes unusable, limiting where contractors can compete. Distances from asphalt plants establish the effective range of contractors. Between 2018 and 2023, the average number of bidders on asphalt projects decreased, with 2020 having the highest average (2.5 bidders) and 2023 having the lowest (1.5 bidders). Parts of Kentucky have a limited number of plants. Single-bid contracts are more common where there are fewer competitors, but the areas around Fayette County appear less competitive than expected.

## Asphalt Limitations

**Asphalt limitations are caused by transport time, temperature requirements, plant locations, staffing needs, and high cost barriers of entry.**

The production of asphalt has inherent limitations based on transport time, which is heavily influenced by asphalt temperature. Temperature requirements create additional limitations tied to locations of plants and staffing needs. The cost of required equipment introduces barriers to entry that make competition difficult.

**Four contractors indicated that asphalt travel time is limited to 30 to 45 minutes, with an hour possible in some circumstances.**

Four interviewed contractors indicated that travel time was the most significant factor in determining whether they would bid on contracts. Contractors stated there is a 30- to 45-minute limit on transporting asphalt, with an hour of driving possible depending on circumstances. The range is based on the temperature of the asphalt. Contractors' estimates varied, but they said asphalt is generally produced at approximately 300 degrees and must be delivered at a minimum of 200 to 280 degrees.[40] The transportation cabinet recommends different temperatures depending on the mixture, with minimum temperatures at the project site ranging from 210 to 300 degrees.[41] Contractors stated that asphalt cannot be loaded onto trucks if the air temperature is below 45 degrees, because lower temperatures result in asphalt chunks in the final production.[42] KYTC recommends air temperatures ranging from 35 to 50 degrees, depending on the type of asphalt work.[43] The president of Riegler Blacktop noted that shipping asphalt to more distant locations increases the likelihood of failing KYTC's compaction tests.[44]

**Temperature requirements put limits on work seasons. Seasonality affects staffing and makes staff retention difficult, which can limit the amount of work a contractor can provide. One contractor noted a limited labor pool for asphalt mixing.**

Temperature requirements limit the season during which the asphalt industry can be active. Mountain Enterprises typically works from April through November.[45] The seasonality affects staffing, and H.G. Mays must lay off staff when work slows.[46] In order to retain employees, Scotty's Contracting & Stone must find work for drivers in off seasons.[47] This can make retention of staff more difficult and can affect the overall amount of work that can be conducted. Mountain Enterprises staff stated it was difficult to maintain staff because if a worker quits in August, the replacement would be laid off in November.[48] Riegler Blacktop staff stated it was difficult to find staff who could work with asphalt, estimating there were about two employees in northern Kentucky and four employees in Louisville with mix design experience.[49]

**Truck and driver availability also influence when contractors bid on projects. Interviewed contractors noted limits caused by difficulty in obtaining trucks and hiring staff.**

Transportation issues also make contractors more reliant on vehicles and staffing. Interviewed contractors indicated they consider the availability of trucks and staff when deciding whether to bid on a project. In recent years, the interviewed contractors had difficulties obtaining trucks and hiring staff, which can limit the amount of work at a time. H.G. Mays staff indicated that truck costs sharply increased over the previous 18 months, with asphalt truck operating costs increasing from roughly $85 per hour to $115 per hour.[50] Scotty's Contracting & Stone staff also indicated that trucking logistics play an important role in determining whether it bids on a contract.[51]

**Rural areas make asphalt transportation more difficult and create fewer opportunities to support a business. One contractor indicated it rotated active plants throughout a season.**

The transportation limit makes asphalt work more difficult in rural areas, where there are fewer roads, more difficult traveling conditions, and fewer work opportunities to support a business. H.G. Mays staff indicated that 80 percent of its work was from KYTC, but the percentage is typically higher in rural areas due to a lack of jobs.[52] Staff from Mountain Enterprises stated it has a service area of 15 counties in Eastern Kentucky but does not have enough work for all Mountain plants to operate throughout the entire asphalt season.[53]

**Entering the asphalt market requires an initial investment of $5 million to $7 million, not including the costs of materials and staffing.**

The asphalt market also has significant barriers to entry, with contractors indicating that a company would need $5 million to $7 million to enter the market. Constructing a plant requires purchasing or renting a site with zoning for asphalt mixing. The plant needs access to aggregate material or must have the material shipped to the location.[54] One contractor noted that the barriers make investing in a new plant risky if there are already competitors in a region.[55] A different contractor noted that some asphalt contractors were able to operate with less work because those companies had already paid for their plants.[56]

During a plant tour, H.G. Mays staff indicated that multiple types of equipment were needed to produce different mixes of asphalt: bins for aggregate, heated drums to remove moisture and dust, machines to add oil to the aggregate, a silo for each mix of asphalt, and a lab or partner to test asphalt results.[57] Some equipment is described as mobile, but H.G. Mays staff said its movement is limited.[58] Mountain Enterprises staff similarly stated that mobile plants were not economically feasible, citing an attempted contract in Virginia.[59]

## Limited Contractors

**A small group of contractors win many single-bid projects. A small number of contractors bid primarily on single-bid contracts.**

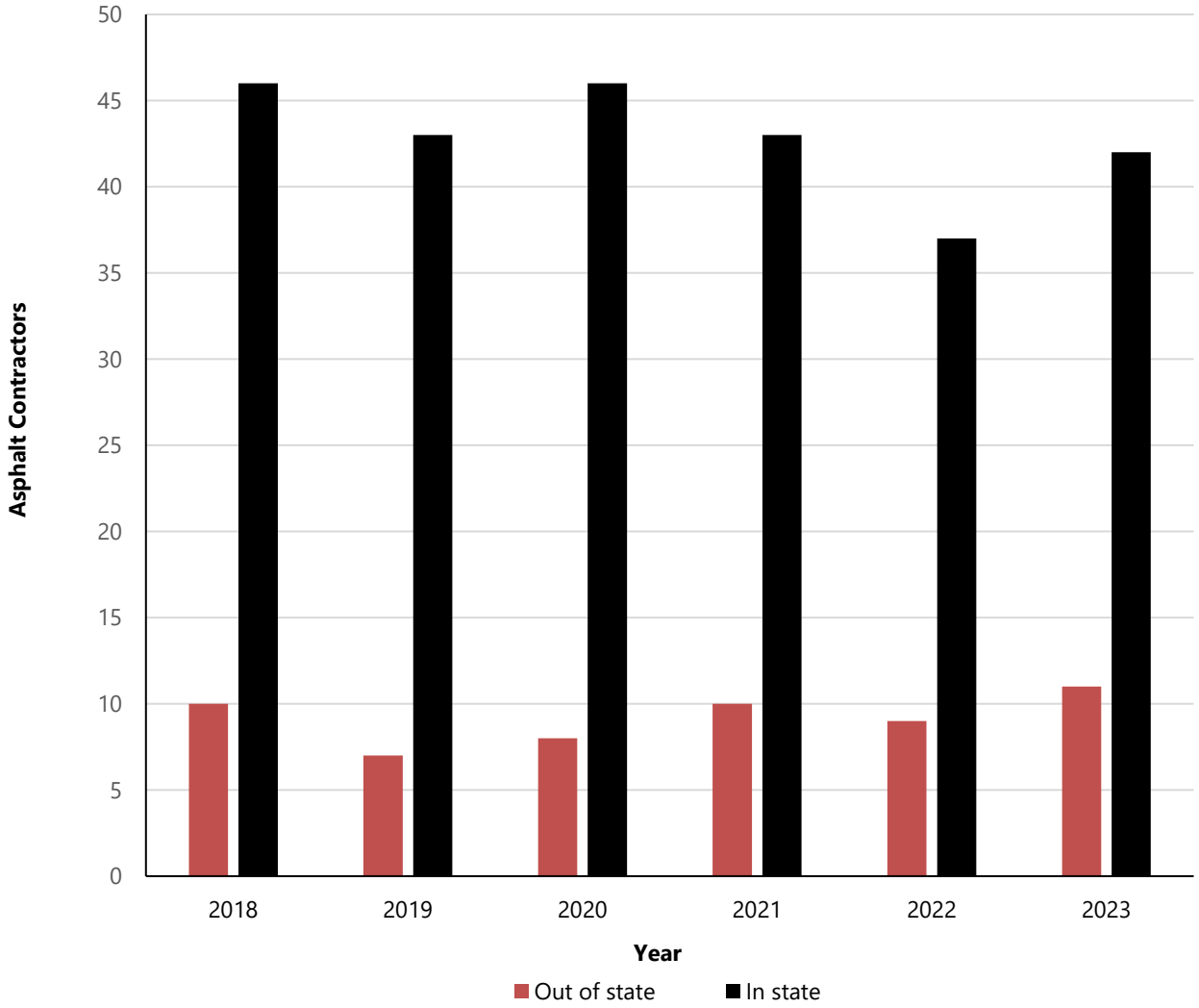
Many single-bid projects are won by a small number of contractors. There are also a small number of contractors whose state work is heavily represented by single-bid contracts. Either there is limited competition in the areas where these contractors work or there is little interest in bidding on state work in these areas.

**From 2018 to 2023, Kentucky has had 46 to 54 registered contractors for asphalt work, representing roughly 10 percent of all contractors registered to work with KYTC.**

Figure 3.G shows the number of contractors qualified to provide asphalt services. Table B.9 lists these numbers alongside the total number of registered vendors. These data were taken from the first list of approved asphalt contractors from July of each year. Approved contractors can vary throughout the year, so the figure and table should be interpreted as a snapshot of typical contractors

available at a specific point in time. Although KYTC qualifies a large number of contractors for services, the percentage of them that provide asphalt is smaller, ranging from 8.9 percent in July 2020 to 10.7 percent in July 2021. KYTC qualifies contractors from outside Kentucky, but most asphalt service providers are within the state, ranging from 79.2 percent in July 2023 to 86.0 percent in July 2019. The overall number of registered contractors decreased by 15.8 percent over this period, but the number of asphalt service providers has stayed roughly the same.

**Table 3.G**
**Contractors Qualified For Asphalt Services**
**2018 To 2023**




Notes: Vendor numbers were based on those qualified in the first list for July of each year. Contractors were considered to be asphalt service providers if they were qualified for C1 (Asphalt Paving Option B) or C2 (Asphalt Paving Option A) projects. Contractors were considered to be Kentucky vendors if their address was in Kentucky.
Source: Staff analysis of Kentucky Transportation Cabinet Prequalified Contractors Lists for July 24, 2018; July 8, 2019; July 2, 2020; July 1, 2021; July 1, 2022; and July 18, 2023.

**The average number of bidders on projects decreased in nearly all districts and regions from 2018 to 2023. In 2018, the average project had 1.9 bidders. By 2023, the average project had 1.5 bidders.**

The statewide number of actual bidders on projects has decreased, as shown in Table 3.4, which lists the average number of bidders on a project by district and by region. Decreases in bidders can indicate a decrease in competition, because there are fewer competitors to place downward pressure on prices. The table illustrates a decrease in the average number of bidders in nearly all districts and regions from 2018 to 2023. The state average started at 1.9 bidders per project and declined to 1.5 bidders by 2023. The average was higher in 2020, but this may have been caused by a decrease in projects let by the cabinet. KYTC staff noted that fewer projects were let in 2020 due to COVID and associated funding impacts.[60]

**Table 3.4**
**Average Number Of Bidders, By Region And Highway District**
**January 2018 To July 2023**

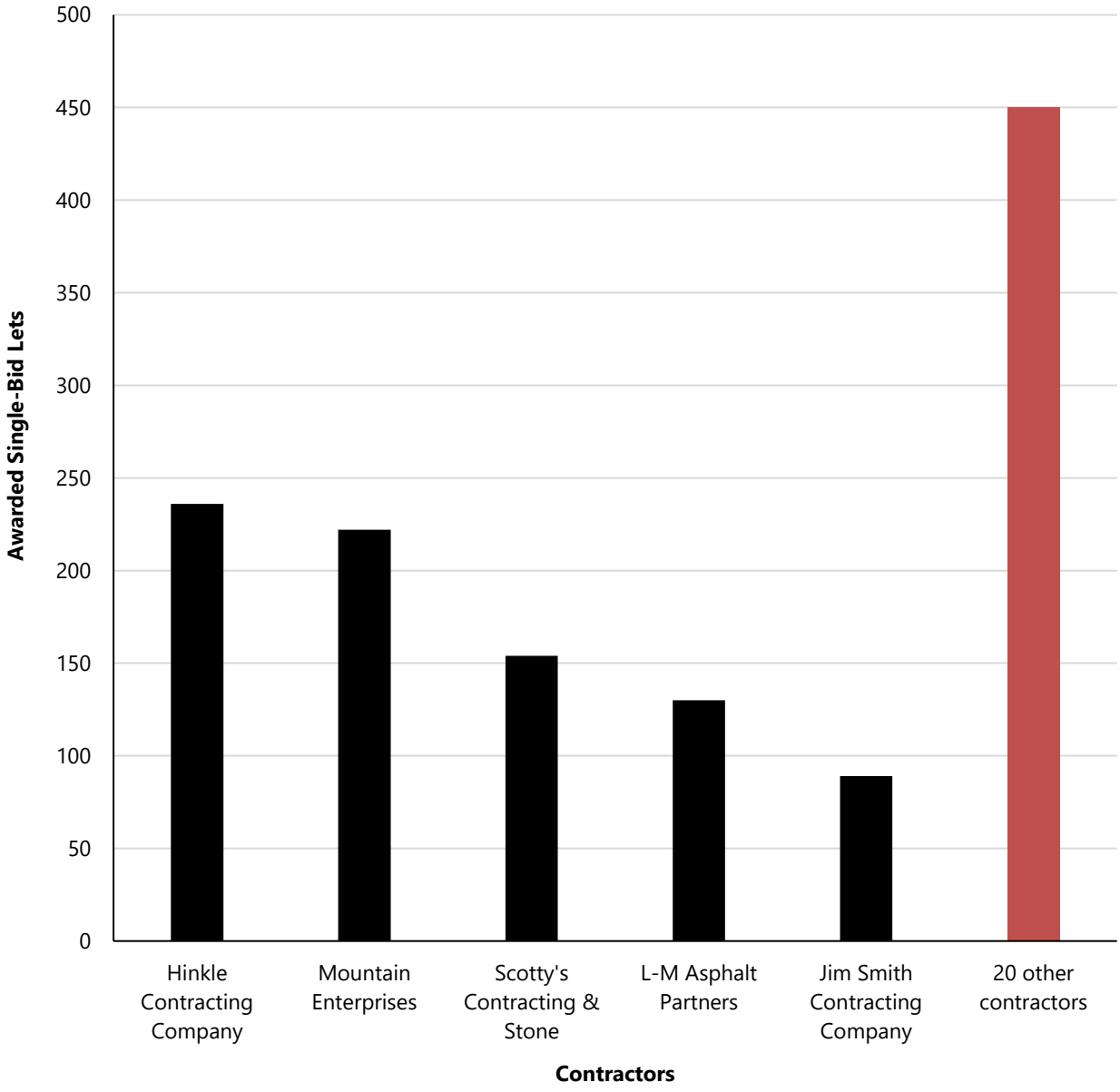
| Region/District | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| West | 1.8 | 1.9 | 2.7 | 1.9 | 1.3 | 1.3 |
| 1 | 1.5 | 1.6 | 1.8 | 1.7 | 1.1 | 1.1 |
| 2 | 2.0 | 2.0 | 3.9 | 2.0 | 1.4 | 1.4 |
| 3 | 2.3 | 2.2 | 2.6 | 2.1 | 1.2 | 1.1 |
| 4 | 1.6 | 1.6 | 2.6 | 1.8 | 1.6 | 1.4 |
| Central | 2.6 | 2.1 | 2.9 | 2.1 | 2.4 | 2.1 |
| 5 | 3.0 | 2.7 | 3.9 | 3.3 | 3.7 | 3.1 |
| 6 | 2.9 | 2.7 | 2.8 | 2.4 | 2.0 | 2.0 |
| 7 | 1.8 | 1.4 | 2.0 | 1.3 | 1.3 | 1.2 |
| East | 1.5 | 1.3 | 2.1 | 1.4 | 1.5 | 1.3 |
| 8 | 1.4 | 1.3 | 1.8 | 1.2 | 1.5 | 1.3 |
| 9 | 1.8 | 1.9 | 2.8 | 2.2 | 1.7 | 1.7 |
| 10 | 1.4 | 1.2 | 2.0 | 1.2 | 1.6 | 1.2 |
| 11 | 1.7 | 1.3 | 2.7 | 1.2 | 1.2 | 1.2 |
| 12 | 1.1 | 1.1 | 1.5 | 1.3 | 1.4 | 1.2 |
| Total | 1.9 | 1.7 | 2.5 | 1.8 | 1.7 | 1.5 |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

**From January 2018 to July 2023, 14 to 20 contractors per year won single-bid contracts. The four contractors with the most awards won more awards than the other 21 combined.**

Although roughly 50 asphalt vendors are available at a time, relatively few win single-bid contracts. Figure 3.H shows the five contractors with the largest number of awarded projects. Table B.10 in Appendix B shows winning projects for all contractors. From January 2018 to July 2023, 14 to 20 contractors won single-bid projects. The four with the most awards won more than the other 21 combined. By comparison, the bottom 15 vendors accounted for only 8.3 percent of single-bid contracts. In 2020, there was an unusually low number of single-bid contracts but a typical number of winning bidders.

**Figure 3.H**
**Number Of Single-Bid Projects Won, By Contractor**
**January 2018 To July 2023**




Source: Staff analysis of Kentucky Transportation Cabinet data on winning asphalt projects.

**Four contractors won nothing but single-bid contracts, but they won a relatively small number. Six other contractors had single-bid award rates of at least 75 percent. For the contractor with the most work, 43.5 percent derived from single-bid projects.**

Comparing the number of single-bid projects won compared to all projects won shows that many contractors faced limited competition. Of contractors that won a single-bid contract, Table 3.5 shows the number of those projects and their total number of projects. Among the four contractors that won single-bid contracts exclusively, three won only one each and Nally & Gibson Georgetown won 13 (four in 2021, three in 2019 and 2020, two in 2018, and one in 2023).

**Table 3.5**
**Projects Won By Single-Bid Winners, By Contractor**
**January 2018 To July 2023**

| | Number Of Contracts Won | | |
|---|---|---|---|
| **Contractor** | **Single-Bid** | **Total** | **% Single Bid** |
| Nally & Gibson Georgetown | 13 | 13 | 100.0% |
| Harper Construction | 1 | 1 | 100.0 |
| Ragle Inc. | 1 | 1 | 100.0 |
| Reynolds Sealing and Striping | 1 | 1 | 100.0 |
| Mountain Enterprises | 222 | 256 | 86.7 |
| Gaddie-Shamrock | 49 | 59 | 83.1 |
| The Allen Company | 82 | 100 | 82.0 |
| Haydon Materials | 63 | 78 | 80.8 |
| Jim Smith Contracting | 89 | 114 | 78.1 |
| L-M Asphalt Partners | 130 | 169 | 76.9 |
| Hinkle Contracting | 236 | 316 | 74.7 |
| Yager Materials | 28 | 48 | 58.3 |
| Lexington Quarry | 14 | 25 | 56.0 |
| The Walker Company of Kentucky | 7 | 13 | 53.8 |
| Rogers Group | 57 | 112 | 50.9 |
| Westate Construction | 1 | 2 | 50.0 |
| Walker Construction & Materials | 18 | 38 | 47.4 |
| Scotty's Contracting & Stone | 154 | 354 | 43.5 |
| Murray Paving | 10 | 26 | 38.5 |
| Bluegrass Contracting | 2 | 6 | 33.3 |
| L-M Asphalt | 1 | 3 | 33.3 |
| Mago Construction | 65 | 197 | 33.0 |
| Rame Contracting | 3 | 10 | 30.0 |
| Eaton Asphalt Paving | 15 | 68 | 22.1 |
| H.G. Mays | 19 | 140 | 13.6 |
| Total/average | 1,281 | 2,150 | 59.6% |

Source: Staff analysis of Kentucky Transportation Cabinet data on winning asphalt projects.

Beyond those four contractors, there were six contractors for which 75 percent or more of contracts came from single-bid projects. These contractors also had significantly more work than the previous group, ranging from 59 contracts for Gaddie-Shamrock to 256 for Mountain Enterprises. For the contractor with the most work, Scotty's Contracting & Stone, 43.5 percent of work came from single-bid contracts.

## Locations Of Plants

**Plants are more common near Louisville and Lexington. Many plants are owned by the same contractors. Except near Fayette County, single-bid contracts are more common where there are fewer plants.**

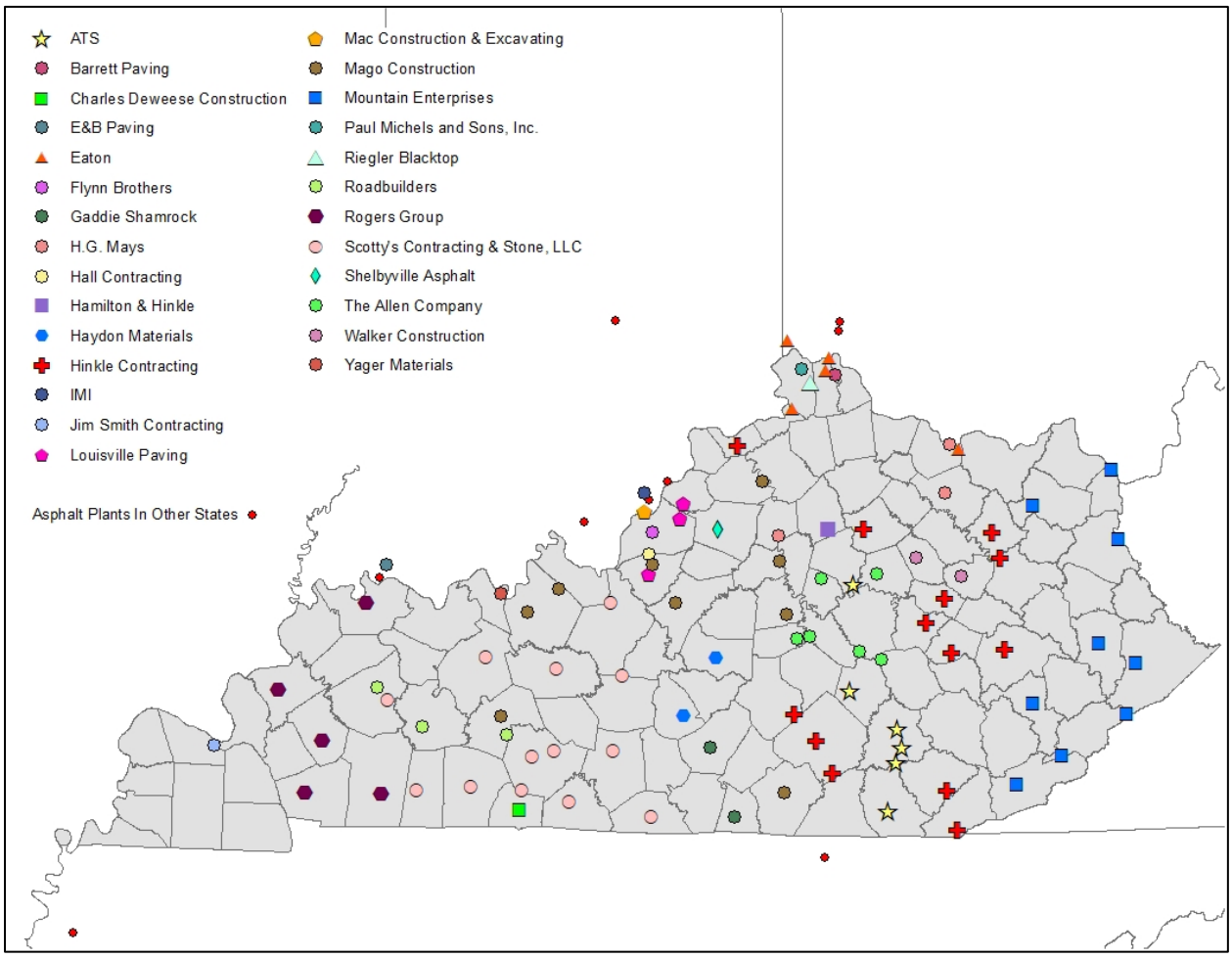
Asphalt plants tend to be more common around Louisville and Lexington; rural areas have fewer plants to provide services. Many plants are owned by the same contractors, which reduces competition in the area. Generally, single-bid contracts are more common in counties where there are fewer plants. However,

counties near Fayette County have a high percentage of single-bid contracts even though multiple plants are near the region.

**The areas around Louisville and Lexington have multiple plants with different owners, while other parts of the state have few asphalt producers before accounting for ownership.**

As previously discussed, the location of asphalt plants significantly affects asphalt competition because contractors can work only within 30 to 45 minutes of the plants. Figure 3.I shows the location of Kentucky plants registered with the Plantmix Asphalt Industry of Kentucky, as well as out-of-state plants registered to bid with Kentucky, as of July 2023. This represents an optimistic view of the market because not all plant owners choose to work with KYTC. The areas around Louisville and Lexington have multiple plants with different owners, while other parts of the state have few asphalt producers before accounting for ownership. Between Cincinnati and Lexington, there are multiple counties with no asphalt producers. Eastern Kentucky has a scattering of plants, and difficult roads exacerbate the distance. Many plants in eastern Kentucky are owned by Mountain Enterprises. Hinkle Contracting owns plants near eastern Kentucky as well as in other areas of the state, giving it a broad reach. In the southwest, four plants are owned by Rogers Group and one is owned by Jim Smith Contracting. In south central Kentucky, Scotty's Contracting & Stone has plants across multiple counties. ATS has six plants that run from Fayette County to Whitley County.

**Figure 3.I**
**Asphalt Plant Locations**
**July 2023**

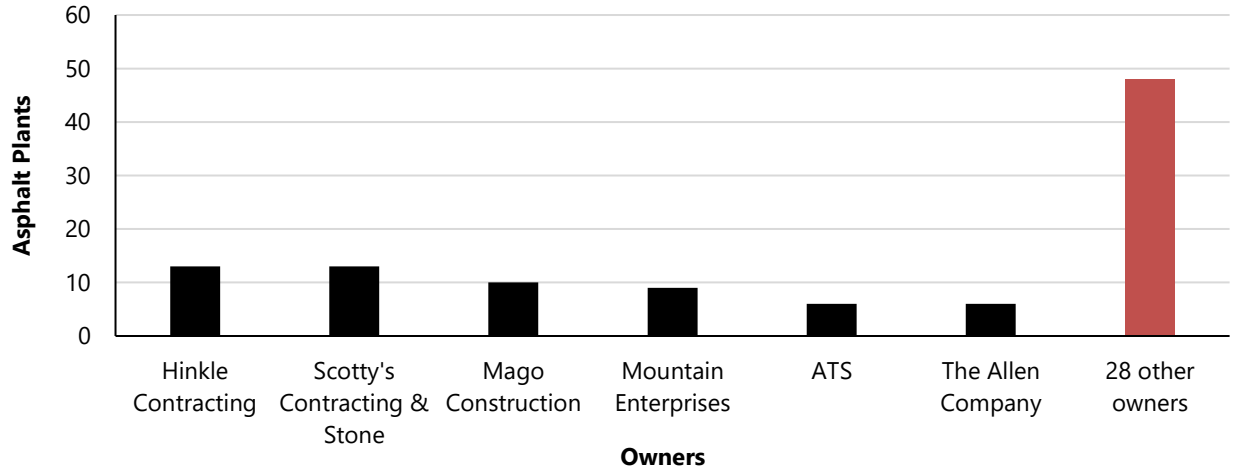



Source: Staff analysis of Plantmix Asphalt Industry of Kentucky data and contractors registered to bid as of July 2023.

**The six companies with the largest number of plants own more than 54 percent of plants in the state. Seventeen companies own only a single plant.**

Table 3.J shows the 34 identified plant owners and the number of plants. Table B.11 in Appendix B shows the full list of owners. The six companies with the largest number of plants own more than 54 percent of plants in the state. Seventeen companies own only a single plant. Contractors with more plants will have a larger service area and can take on more work, giving them an advantage over companies with fewer plants.

**Figure 3.J**
**Asphalt Plant Owners And Plants Owned, By Contractor**
**July 2023**

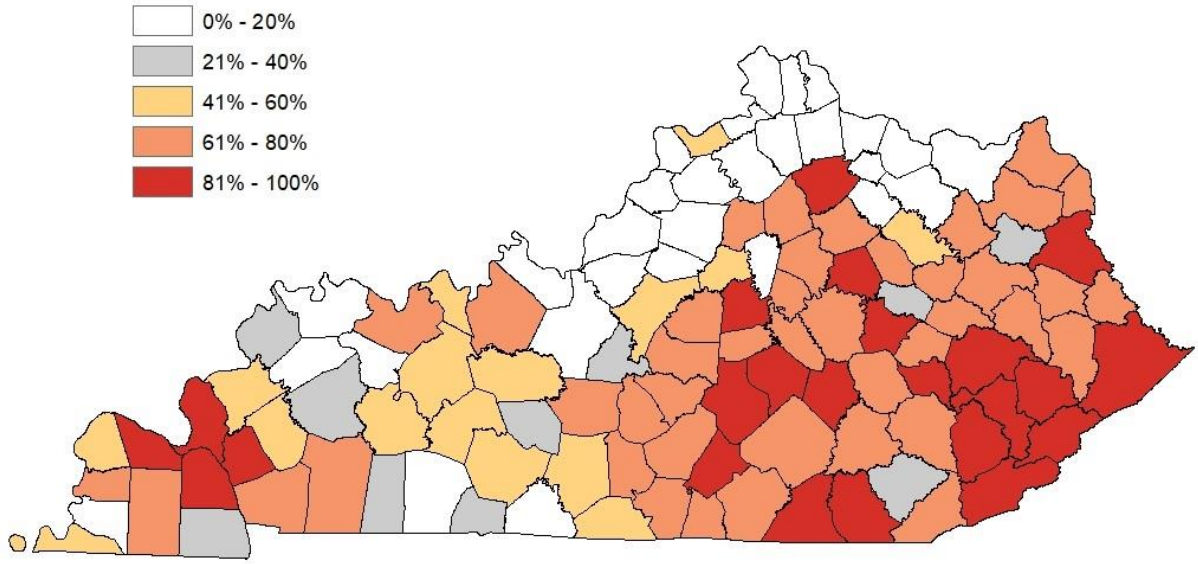



Source: Staff analysis of Plantmix Asphalt Industry of Kentucky data and registered out-of-state bidders.

**Single-bid contracts are common in the southwest and the east but uncommon near Louisville. Many counties near Fayette have high rates of single-bid contracts.**

As Figure 3.K shows the counties where single-bid contracts are the most common. Red and orange indicate where single-bid contracts are most common. In most areas, the patterns match expectations based on plant locations. Single-bid contracts are common in the southwest and the east but uncommon near Louisville. Many counties near Fayette have high rates of single-bid contracts.

**Figure 3.K**
**Single-Bid Asphalt Contracts As A Percentage Of All Contracts, By County**
**January 2018 To July 2023**




Source: Staff economists' analysis of Kentucky Transportation Cabinet letting data.

Table 3.6 shows the percentage of single-bid projects in Fayette County and bordering counties. Fayette County had the largest number of overall bids, but almost 70 percent were single-bid contracts and 29 of 36 single-bid contracts went to L-M Asphalt Partners. Clark County had the highest single-bid contract rate, with 17 single-bid contracts going to the Allen Company. Woodford County was the only bordering county with no single bids; its 39 contracts were awarded to seven vendors, and all projects received two or three offers. Two contractors, L-M Asphalt Partners and Lexington Quarry Company, received more than half of all contracts and more than 60 percent of single-bid contracts in this group of counties.

**Table 3.6**
**Single-Bid Projects In Central Kentucky, By County**
**January 2018 To July 2023**

| County | Single Bids | All Bids | % Single Bid |
|---|---|---|---|
| Bourbon | 13 | 17 | 76.5% |
| Clark | 17 | 18 | 94.4 |
| Fayette | 36 | 52 | 69.2 |
| Jessamine | 14 | 19 | 73.7 |
| Madison | 17 | 25 | 68.0 |
| Scott | 15 | 20 | 75.0 |
| Woodford | 0 | 16 | 0.0 |
| Total/average | 112 | 167 | 67.1% |

Source: Staff analysis of Kentucky Transportation Cabinet data.

The prevalence of single-bid contracts in central Kentucky, around Fayette County, is unusual considering the number of asphalt plants in the area. Unless the winning contractor has efficient prices, this would present an opportunity for other contractors to undercut the winner and gain more work. An individual contractor having control of a market across multiple years has an incentive to include additional profit, which can increase prices for the commonwealth. Asphalt contractors do not appear interested in work in this region, and Kentucky may be paying an unnecessarily high price for services.

### Recommendation 3.1

**Recommendation 3.1**

**The Kentucky Transportation Cabinet should monitor single-bid asphalt contracts in central Kentucky, where there are multiple potential contractors for the region. If the pattern continues, the cabinet should contact nonbidding contractors to determine if there is a structural reason why they do not submit bids.**

## How Do Kentucky's Policies Compare To Federal Guidance And Other States' Policies?

**The Federal Highway Administration provides best practices and recommendations to transportation agencies. Kentucky follows its suggestions generally, except for two areas.**

Given that Kentucky has a prevalence of single-bid contracts, as well as barriers to the market, policies for competition and review should be optimal to compensate for the market weakness. The Federal Highway Administration (FHWA) provides best practices and recommendations to state transportation agencies (STAs) interested in improving their bid review and evaluation process. The guidelines are not binding law but serve as recommendations to ensure a fair and competitive bidding process. FHWA recommends that STAs consider their own policies and procedures in conjunction with the federal guidelines.[61] Table 3.7 summarizes Kentucky's compliance with federal guidance, showing that Kentucky generally follows the suggestions except in two important areas.

**Table 3.7**
**Kentucky Transportation Cabinet Compliance With Federal Recommendations Related To Engineer's Estimates, Bid Reviews, And Evaluations**

| Recommendation | Compliance |
|---|---|
| Prequalification process | |
| Prequalification required in order to bid on projects | Yes |
| Process includes collection of information from respective bidders including financial statements, resources, work experience, staffing, work capacity, types of work, ownership/management structure | Yes |
| Noncollusion statement | |
| Standard specification addresses evidence of collusion among bidders and specifies that proposals can be rejected based on evidence of collusion | Yes |
| Plan holders/eligible bidders | |
| List of plan holders/eligible bidders should not be published or released prior to letting | No |
| Competition | |
| Appropriate measures exist to maximize competition | Yes |
| Projects are widely advertised | Yes |
| Consideration is given to rejecting noncompetitive bids and readvertising | Yes* |
| Consideration is given to dividing projects into smaller contracts, or grouping small projects into a larger project to foster competition | Yes |
| Engineer's estimates | |
| Appropriate techniques used for development of estimates of project costs (such as historical bid-based, cost-based, risk-based, or hybrid technique) | Yes |
| Documented cost estimate is based on the state's best estimate of costs | Yes |
| Engineer's estimate is confidential | Yes |
| Consistency and reliability of engineer's estimates monitored according to market conditions | Yes |
| Bid analysis and awards | |
| Bid review considers factors such as comparison of bids against engineer's estimate, number of bids submitted, distribution/range of bids, identity/geographic location of bidders, potential savings if project is readvertised, urgency, unbalancing of bids, current market conditions and workload | Yes |
| Multidisciplinary review committee analyzes bids | Yes |
| Written procedures exist to justify award or rejection of bid | No |

| Recommendation | Compliance |
|---|---|
| Reasons for lack of interest are identified when significant number of firms take out a set of plans, but few bid | No |
| Post-award reviews | |
| Evaluation of bids is reviewed | Yes |
| Efforts are taken to determine if bid rigging is ongoing or has occurred recently | Yes |
| Internal review process exists to address bidding irregularities | Yes |

* KYTC's procurement policies and procedures do not specifically state that noncompetitive bids will be readvertised, but a review of KYTC Awards Committee meeting minutes shows that projects are rejected and readvertised fairly regularly. Further, KYTC's procurement manual states that one factor to be considered by the Awards Committee is whether readvertisement of a project may generate potential savings to the state.
Source: Staff analysis of Kentucky Transportation Cabinet procurement manual and Federal Highway Administration *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation.*

## Prequalification

**Kentucky's prequalification process complies with federal guidelines and is similar to that of bordering states.**

Kentucky's prequalification process complies with federal guidelines and is similar to that of bordering states. Both the FHWA and the American Association of State Highway and Transportation Officials (AASHTO) encourage STAs to use a contractor prequalification system to determine job experience and work capacity and to identify contractors that may bid. The prequalification system should document a potential contractor's financial standing (via financial statements), resources (plants, property and equipment), staffing capability, work experience, work capacity, and the types of work a firm is capable of undertaking. FHWA and AASHTO also recommend that the prequalification process collect information on a firm's ownership or management structure, as this information could reveal monetary motives if collusive bidding practices are suspected.[62]

Contractors wishing to bid on construction or maintenance projects in Kentucky must be prequalified and possess a certificate of eligibility issued by KYTC. The certificate documents the types of work for which the contractor is qualified and the contractor's maximum eligibility amount.[63] Contractors wishing to obtain a certificate of eligibility must submit an application, which must include information regarding the applicant's ability to perform types of work, construction experience, résumés of principal officers and key personnel, a description of plant and equipment, financial statements, and a certificate of authority if the applicant is a foreign entity.[64]

In addition to complying with federal guidelines, KYTC's prequalification process resembles processes used by Kentucky's seven neighboring states. The transportation departments of Illinois, Indiana, Missouri, Ohio, Tennessee, Virginia, and West Virginia all require that contractors be prequalified in order to bid

on projects. All seven states require that prospective contractors complete a statement and/or application that is used to determine the contractor's work capacity and the types of work it is eligible to perform.[65]

### Noncollusion Statement

**Kentucky meets federal guidance on noncollusion statements and has language similar to that used in three bordering states.**

Kentucky meets federal guidance on noncollusion statements and uses language similar to that used in three bordering states. The federal guidelines recommend that all STAs have standard specifications addressing evidence of collusion among bidders and specifying that proposals can be rejected based on evidence of collusion.[66] KYTC's standard specifications includes language addressing the evidence of collusion among bidders. KYTC rejects bidders' proposal if evidence of collusion is identified. Further, participants in collusion are not considered for future work until reinstated as qualified bidders.[67]

Other states reviewed include specifications addressing the issue evidence in collusion in their procurement policies and procedures. The language used in the Indiana, Missouri, and West Virginia policies is nearly identical to the language used in the KYTC manual of standard specifications.[68]

### Eligible Bidders Or Plan Holders List

**Kentucky does not follow federal guidance for the posting of eligible bidders, but its policies are similar to those in five bordering states. Federal policy recommends that states not release information on plan holders, which may encourage collusion. If a state needs to release this information, it should wait until there are at least three potential bidders.**

Kentucky does not follow federal guidance for the posting of eligible bidders, but its policies are similar to those in five bordering states. FHWA recommends that STAs not publish or release information regarding eligible bidders or plan holders, as doing so may encourage collusion. FHWA acknowledges that publishing a list of eligible bidders is useful to subcontractors and disadvantaged business enterprises (DBEs) in that it allows DBEs to identify firms to contact regarding upcoming projects. Federal guidance indicates that not publishing a list creates a more competitive bidding environment and decreases the likelihood of collusion. If STAs need to release this information to be consistent with their policies, they should wait until there are at least three potential bidders for a project. Notwithstanding this recommendation, a 2017 AASHTO survey found that most states publish a list of plan holders on their websites or make this information available upon request.[69]

**KYTC publishes a list of eligible bidders on its website.**

KYTC publishes a list of eligible bidders for each project on its website. The Division of Construction Procurement updates the listing periodically before opening the bids.[70] KYTC officials stated that eligible contractors are listed in order in order to give

opportunities to the state's subcontractors—particularly DBEs—to reach out to contractors eligible to bid on projects.[71]

Of the seven states reviewed by LOIC staff, five publish a list of eligible bidders/plan holders prior to the close of the letting: Illinois, Indiana, Missouri, Ohio, West Virginia. Tennessee and Virginia do not appear to release the names of eligible bidders/plan holders. An Illinois Department of Transportation official echoed KYTC's statement that posting a list of potential bidders is beneficial to subcontractors and DBEs. In addition to posting a list of authorized bidders, Illinois maintains a separate list of nonbidders for each job posting. The nonbidders list is often used by material suppliers and/or subcontractors that do not intend to bid on a contract.[72]

**Given that single-bid projects are the most frequent result for asphalt projects, it may be beneficial to prevent contractors from being aware of potential competitors.**

FHWA indicates that keeping plan holder/eligible lists confidential creates a more competitive environment for potential bidders.[73] Given that single-bid projects are the most frequent result for asphalt projects awarded by KYTC, this practice may be beneficial to prevent contractors from being aware of other potential bidders. Even when there are multiple bidders, a bidder that knows the exact competition for a contract may be able to adjust its bid based on expected bids from competitors. Maintaining the confidentiality of the list of bidders will have a negative effect on subcontractors and DBEs, but this may be offset by providing a list of interested subcontractors, similar to Illinois' list of nonbidders.

### Recommendation 3.2

**Recommendation 3.2**

**The Kentucky Transportation Cabinet should transition to keeping plan holder lists confidential or waiting until there are at least three potential bidders on a project before releasing identities of plan holders. The cabinet should provide an option for subcontractors to indicate interest in the project, so primary contractors can identify potential subcontractors.**

### Maximizing Competition

FHWA recommends that STAs take appropriate measures to maximize competition among potential bidders. Potential strategies include:

- Advertising widely so potential bidders are properly notified
- Providing extended advertisement periods for large and/or complex projects

- Dividing large projects into several small projects, or combining small projects into a large project, in an effort to foster competition
- Considering rejection and readvertising of noncompetitive bids
- Including price adjustment clauses for certain materials to reduce risk to the contractor[74]

**Kentucky allows work to be readvertised if bids are unbalanced or if a contract is not executed. Meeting minutes show that KYTC readvertises lets.**

KYTC's Construction Procurement Manual notes that work may be readvertised if bids are unbalanced or if there is a failure to execute the contract.[75] The manual does not specify if the cabinet will consider readvertising work in the event of noncompetitive bids, but it does state that the Awards Committee's review of bids should consider potential savings if a project is readvertised.[a] [76] A review of Awards Committee meeting minutes shows that the committee rejects bids regularly and readvertises them. For example, at its February 3, 2020, meeting, the Awards Committee awarded a job to a contractor whose bid was more than 20 percent higher than the engineer's estimate. The basis for this award was that the job had been let four times and no better bids were anticipated.[77]

**There is no indication that KYTC extends advertising for more complex projects. Federal guidance suggests breaking larger projects into smaller work to foster competition. It is unclear if KYTC follows this guidance, but it has discretion to do so.**

There is no indication in the procurement manual that KYTC extends the advertising period for larger, more complex projects, though staff indicated the cabinet does extend the advertisement period.[78] Federal guidance suggests breaking larger projects into small ones in order to foster competition. It remains unclear if KYTC follows this policy, but the Bid Proposal section of KYTC's manual of standard specifications states that the cabinet has the discretion to issue bid proposals for projects in combination or separately.[79] In the event that a project does not receive a bid, KYTC often attempts to bundle the project that received no bids with another project within the same district and with a similar scope, in an attempt to garner more interest and bidders.[80]

## Engineer's Estimate

**Kentucky's engineer's estimate appears to use a method suggested by federal guidance, but staff could not verify the methods. KYTC did not want to release information, for fear of undermining its estimates. While this is appropriate, KYTC might find it difficult to justify project estimates when no one can verify methods.**

Kentucky's engineer's estimate appears to use a method suggested by federal guidance, but staff could not verify the actual methods. KYTC staff stated they did not want to release information on the engineer's estimate process because it could undermine cabinet estimates and bidding competitiveness. While this is appropriate,

[a] Per KYTC's Construction Procurement Manual, the Awards Committee "shall meet to review and analyze bids submitted to the Division of Construction Procurement. The committee will make a recommendation to award or reject each project in a letting to the appointed authority of the Department of Highways."

the cabinet might find it difficult to justify project estimates when no one can verify methods. According to a 2015 FHWA report, 25 other states have developed internal cost estimating guidance or manuals.[81]

FHWA states that the engineer's estimate is the "contracting agency's benchmark for analyzing bids and is an essential element in the project approval process." Federal guidance notes that the estimate should reflect a "fair and reasonable" cost that the STA is willing to pay for the project. FHWA emphasizes that STAs should consider changing market conditions and the competitive bidding into the engineer's estimate.[82] KYTC's Construction Procurement Manual notes that the engineer's estimates for projects represent "fair and reasonable costs to construct a project with current material, labor, and equipment costs including overhead and profit."[83]

AASHTO has identified several techniques to develop cost estimates:

- Historical bid-based: This technique matches estimates of line-item quantities from project plans to either historical or average historical unit bid prices. The historical data are typically adjusted for project conditions and general market conditions (as in the competitive bidding environment).
- Cost-based: This technique considers factors related to the actual performance of the work, such as the current cost of labor, equipment, and materials; production rates; overhead; and profit.
- Combination of historical bid-based and cost-based: This hybrid approach combines historical and cost-based data. As most projects contain a small number of items that make up a significant portion of the total cost, STAs should collect information on local market prices of materials, dealers, rental companies, and material suppliers, in order to obtain current cost information regularly.
- Risk-based: This technique applies risk identification and uncertainty analysis techniques to forecast project contingencies. This technique is most frequently used in the planning, scoping, and early design phases of projects.[84]

**KYTC uses the cost-based, historical bid-based, and hybrid historical bid-based/cost-based techniques to determine unit prices for its estimates. Staff of two asphalt contracting companies stated that the commonwealth's estimates have not kept up with inflation.**

KYTC uses the cost-based, historical bid-based, and the hybrid historical bid-based/cost-based techniques to determine unit prices for its estimates.[85] KYTC officials noted that the engineer's estimate is viewed as the state's bid on the project in question. While officials acknowledged that the estimates include factors such as historical bid amounts, unit prices, and potential

production rates, the formula by which they generate engineer's estimates for projects is proprietary and confidential. This is done to maintain bidding leverage, which allows KYTC to secure competitive bids.[86] KYTC's procurement manual notes that the cabinet's estimates consider current material, labor, and equipment costs including overhead and profit. However, staff of two asphalt contracting companies interviewed by LOIC stated that the commonwealth's estimates have not kept up with inflation.[87]

Both FHWA and AASHTO recommend that the engineer's estimate be kept secret. While some STAs keep estimates confidential even after the project is constructed, FHWA recommends keeping the estimate confidential prior to the awarding of the contract. Confidentiality prior to the award is especially important in instances where the STA anticipates minimal competition for the project. Kentucky does not disclose the engineer's estimate to the public until bids are opened.[88] The engineer's estimate is not published if no bids are received on a project.[89]

**The confidentiality of the engineer's estimate is a reasonable safeguard but can create the appearance of intentional obfuscation and open the cabinet to criticism. Having a method to verify engineer's estimates would allow the cabinet to defend its process.**

The confidentiality of the engineer's estimate is a reasonable safeguard, but it can create the appearance of intentional obfuscation and open the cabinet to criticism. As evidenced by interviews with contractors, parties may accuse the cabinet of using outdated estimates. Critics of the cabinet may also accuse the cabinet of setting engineer's estimates too high and approving bids that cost taxpayers more than needed. Having a method to verify engineer's estimates would allow the cabinet to defend its process.

### Recommendation 3.3

**Recommendation 3.3**

**The Kentucky Transportation Cabinet should ensure it has an internal process to verify its engineer's estimate, to ensure that the estimate accurately represents project costs.**

### Bid Analysis And Awards

**Kentucky complies with federal guidance on the evaluation of bids but does not have written procedures for justifying the award of contracts or the rejection of bids. It is also unclear whether KYTC conducts trend analysis of contractors across projects.**

Kentucky complies with federal guidance on the evaluation of bids but does not have written procedures for justifying the award of contracts or the rejection of bids. It is also unclear whether KYTC conducts trend analysis of contractors across projects.

FHWA recommends considering several factors to determine whether the degree of competition for a project was adequate, including the number of bids, the difference between the low

bid and the engineer's estimate, the spread or variation of all bids, the project type, the time of year, and the relative availability of subcontractors for projects. Unless a project is critical or presents a safety concern to the public, federal guidance recommends letting projects again because readvertising is unlikely to result in more expensive bids.[90] FHWA recommends that state agencies analyze projects that are let again in order to track savings or higher costs. If the second letting results in higher costs to the agency, a review of estimates and procedures are warranted. FHWA also recommends that STAs employ bid collusion techniques to identify potential bid rigging or collusion.[91]

FHWA recommends that STAs reviewing bids consider the following factors:

- Comparison of bids against the engineer's estimate
- Number of submitted bids
- Distribution or range of bids received
- Identity and geographic location of the bidders
- Potential for savings if the project is readvertised
- Bid prices for the project under review versus bid prices for similar projects in the same letting
- Urgency of the project
- Current market conditions/workload
- Unbalancing of bids
- Variances between unit bid prices and estimates and/or other bids[92]

FHWA also recommends that STAs use a multidisciplinary review committee to analyze bids "so the various perspectives within the contracting agency are represented and are provided with technical and managerial input." Additionally, the committee could be used to identify the effects of awarding contracts or rejecting bids.[93]

KYTC's Awards Committee is a multidisciplinary review committee that analyzes bids and makes recommends to award or reject projects in lettings. The KYTC Construction Procurement Manual outlines factors for the Award Committees to consider when reviewing bids. The factors listed in the procurement manual for the Awards Committee are nearly identical to the factors recommended by the FHWA.[94]

**Federal guidance recommends that STAs have written procedures for justifying both the award of contracts and the rejection of bids. KYTC does not appear to have a written policy for when to award or reject a bid.**

Federal guidance states that STAs should have written procedures for justifying both the award of contracts and the rejection of bids.[95] KYTC does not appear to have a written policy for when to award or reject a bid. The lack of a written policy can create

the appearance of arbitrary decisions, regardless of patterns in the cabinet's actions. Based on LOIC staff analysis of rejected bids, KYTC tends to reject bids when they are roughly 110 percent of the engineer's estimate. However, the cabinet has approved bids at higher estimates, up to 137 percent of the engineer's estimate. KYTC should develop a written policy to ensure it continues to make consistent decisions while allowing for flexibility in the projects it approves.

### Recommendation 3.4

**Recommendation 3.4**

**The Kentucky Transportation Cabinet should develop written guidance for justifying the award or rejection of a bid. These should include when the cabinet can make exceptions to the guidance and how that should be documented.**

**KYTC posted unit bid prices even when all bids were rejected. Federal guidance does not address this practice, but it can undermine competitiveness if the project is rebid.**

While reviewing when the cabinet rejected bids, LOIC staff found that KYTC posted unit bid prices even when all bids were rejected. There is no federal guidance on providing unit costs after rejection, but this practice can undermine competitiveness if the project is rebid, allowing competitors to tacitly collude or to readjust bids based on other prices, rather than bidding based on efficiency and expected profit. One contractor expressed frustration that when a project was rebid, competitors could price around their offer instead of providing its best offer.[96] If KYTC cannot establish a valuable reason to provide unit prices after rejecting all bids, it should consider not releasing unit prices to maintain competitive estimates on potential second lettings. This would not prevent the cabinet from communicating why all bids were rejected.

### Recommendation 3.5

**Recommendation 3.5**

**The Kentucky Transportation Cabinet should cease posting unit bid prices when it rejects all bids on a project, unless it can determine it is in the cabinet's best interest to post the prices.**

**Federal guidance recommends that states compare unit bid prices to determine if contractors are submitting consistent prices on projects. It is unclear if the cabinet conducts trend analysis on different projects.**

FHWA also recommends that STAs compare project unit bid prices subsequent to lettings to determine if contractors are submitting consistent prices on projects for which they bid.[97] It is unclear if KYTC conducts trend analysis of contractors' bids on different projects. KYTC does perform comparative analysis of unit bid prices for lets of individual projects, but it is unclear if subsequent analyses are performed.

Last, it is helpful for an STA to determine if many potential contractors take out plans, but only a small number submit a bid. This pattern may indicate a lack of interest in the project, and steps could be taken to improve interest.[98]

### Post Award and Review

**Federal guidelines stress that states should make a conscious effort to determine if bid rigging is occurring. They recommend a period of 5 years for the initial evaluation.**

Federal guidelines stress that STAs should check for recent or current bid rigging. The guidelines recommend a period of 5 years for the initial evaluation to determine if any abnormal competitive bid patterns exist. These reviews should look at the number of awards to a specific firm, project bid tabulations, firms that submitted a bid and then became a subcontractor on the project, rotation of firms being the low bidder, consistent variation between each bid and the estimate, the type of work involved, and any other items that would indicate noncompetitive bidding. The majority of STAs responding to a 2017 survey said they use a module within the AASHTOWare Project Software to detect potential collusion. If irregular bid patterns are found, the STA can provide evidence to authorities from this software for further investigation.

### Recommendation 3.6

**Recommendation 3.6**

**The Kentucky Transportation Cabinet should use procurement software to detect potential collusion. The cabinet should have a policy to provide evidence to authorities if collusion is suspected.**

# Appendix A

## Kentucky Transportation Cabinet Response

### Placeholder For Response

This appendix serves as a placeholder for the KYTC response. When the report is published, the response will be included here.

# Appendix B

## Supplemental Data Tables

Chapter 3 provides data visualizations to help readers understand asphalt contracting. This appendix provides more detailed data for readers who wish to see specifics.

**Table B.1**
**Number Of Awarded Single-Bid Asphalt-Related Projects By Year**
**January 2018 To July 2023**

| Year | Number Of Projects | Single-Bid Projects | % Single Bid |
|---|---|---|---|
| 2018 | 468 | 213 | 45.5% |
| 2019 | 467 | 243 | 52.0 |
| 2020 | 239 | 66 | 27.6 |
| 2021 | 536 | 264 | 49.3 |
| 2022 | 505 | 290 | 57.4 |
| 2023 | 324 | 205 | 63.3 |
| Total/average | 2,539 | 1,281 | 50.5% |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

**Table B.2**
**Number Of Awarded Asphalt-Related Contracts, By Number Of Bidders**
**January 2018 To July 2023**

| Bidders | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|
| 1 | 213 | 243 | 66 | 264 | 290 | 205 | 1,281 |
| 2 | 127 | 123 | 54 | 146 | 105 | 88 | 643 |
| 3 | 66 | 55 | 52 | 81 | 50 | 19 | 323 |
| 4 | 40 | 31 | 33 | 28 | 34 | 4 | 170 |
| 5 | 16 | 13 | 16 | 13 | 25 | 7 | 90 |
| 6 | 5 | 1 | 11 | 2 | 1 | 1 | 21 |
| 7 | 1 | 1 | 2 | 2 | 0 | 0 | 6 |
| 8 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 9 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Total | 468 | 467 | 239 | 536 | 505 | 324 | 2,539 |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

## Table B.3
## Percentage Of Single Bids On Awarded Asphalt-Related Projects, By Highway District
## January 2018 To July 2023

| Highway District | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Average |
|---|---|---|---|---|---|---|---|
| 1 | 70.6% | 46.7% | 50.0% | 63.6% | 94.3% | 90.5% | 69.9% |
| 2 | 28.9 | 29.8 | 10.5 | 32.2 | 64.3 | 66.7 | 41.3 |
| 3 | 23.7 | 8.1 | 28.6 | 20.7 | 89.2 | 90.9 | 39.0 |
| 4 | 63.8 | 51.0 | 21.1 | 48.9 | 51.2 | 67.6 | 51.0 |
| 5 | 18.9 | 7.1 | 5.0 | 7.0 | 8.5 | 12.0 | 9.9 |
| 6 | 13.3 | 19.1 | 3.1 | 11.1 | 23.9 | 14.3 | 14.7 |
| 7 | 41.7 | 77.8 | 42.9 | 75.0 | 78.3 | 80.0 | 67.8 |
| 8 | 77.4 | 84.4 | 43.8 | 90.2 | 71.0 | 77.8 | 77.5 |
| 9 | 30.8 | 41.9 | 15.4 | 18.9 | 44.0 | 33.3 | 33.0 |
| 10 | 82.9 | 86.8 | 52.9 | 80.0 | 60.0 | 75.0 | 74.3 |
| 11 | 44.4 | 78.7 | 33.3 | 86.1 | 81.3 | 81.3 | 70.6 |
| 12 | 92.0 | 88.2 | 75.0 | 77.8 | 68.2 | 81.3 | 81.6 |
| Average | 45.5% | 52.0% | 27.9% | 49.3% | 57.4% | 63.3% | 50.5% |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

## Table B.4
## Ratio Of Awarded Amount To Engineer's Estimate, By Number Of Bidders
## January 2018 To July 2023

| # Of Bidders | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Average |
|---|---|---|---|---|---|---|---|
| 1 | 100.1% | 100.9% | 97.5% | 101.2% | 101.3% | 99.4% | 100.5% |
| 2 | 88.6 | 93.9 | 88.2 | 88.7 | 98.9 | 101.4 | 93.5 |
| 3 | 92.3 | 89.3 | 90.9 | 92.9 | 94.4 | 100.9 | 93.2 |
| 4 | 86.1 | 88.4 | 88.6 | 104.0 | 92.8 | 77.6 | 92.1 |
| 5 | 83.3 | 91.7 | 89.9 | 86.3 | 84.4 | 77.6 | 87.0 |
| 6 | 98.2 | 88.1 | 93.9 | 83.1 | 71.3 | 73.4 | 93.1 |
| 7 | 69.1 | 65.4 | 87.9 | 99.5 | N/A | N/A | 89.4 |
| 8 | N/A | N/A | 83.6 | N/A | N/A | N/A | 83.6 |
| 9 | N/A | N/A | 86.4 | N/A | N/A | N/A | 86.4 |
| Average | 94.6% | 97.6% | 91.4% | 95.8% | 98.9% | 99.6% | 96.7% |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

## Table B.5
## Number Of Awarded Contracts Over The Engineer's Estimate
## January 2018 To July 2023

| Ratio Of Award Amount To Engineer's Estimate | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|
| 100 percent or lower | 330 | 281 | 189 | 321 | 289 | 178 | 1,588 |
| Greater than 100 percent | 138 | 186 | 50 | 215 | 216 | 146 | 951 |
| Total | 468 | 467 | 239 | 536 | 505 | 324 | 2,539 |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

## Table B.6
## Total Awarded Asphalt Contract Amounts Compared To Total Of Engineer's Estimates
## January 2018 To July 2023

| Year | Number Of Contracts | Total Award | Total Engineer's Estimate | Difference |
|---|---|---|---|---|
| 2018 | 468 | $575.0 | $608.1 | ($33.0) |
| 2019 | 467 | 608.8 | 623.8 | (15.0) |
| 2020 | 239 | 328.3 | 359.4 | (31.1) |
| 2021 | 536 | 684.8 | 715.2 | (30.4) |
| 2022 | 505 | 827.8 | 836.9 | (9.1) |
| 2023 | 324 | 545.2 | 547.4 | (2.2) |
| Total | 2,539 | $3,569.9 | $3,690.8 | ($120.9) |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

## Table B.7
## Number Of Awarded Single-Bid Contracts Greater Than The Engineer's Estimate
## 2018 To 2023

| Ratio Of Award Amount To Engineer's Estimate | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|
| 100 percent or less | 106 | 86 | 32 | 94 | 121 | 94 | 533 |
| Greater than 100 percent | 107 | 157 | 34 | 170 | 169 | 111 | 748 |
| Total | 213 | 243 | 66 | 264 | 290 | 205 | 1,281 |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

## Table B.8
## Total Awarded Asphalt Contract Amounts Compared To Total Of Engineer's Estimates, By Millions Of Dollars
## January 2018 To July 2023

| Year | Number Of Contracts | Total Award | Total Engineer's Estimate | Difference |
|---|---|---|---|---|
| 2018 | 213 | $305.6 | $305.3 | $0.4 |
| 2019 | 243 | 398.4 | 395.0 | 3.4 |
| 2020 | 66 | 76.6 | 78.6 | (1.9) |
| 2021 | 264 | 299.4 | 295.8 | 3.6 |
| 2022 | 290 | 462.1 | 455.9 | 6.1 |
| 2023 | 205 | 363.9 | 366.0 | (2.0) |
| Total | 1,291 | $1,906.1 | $1,896.6 | $9.5 |

Source: Staff analysis of Kentucky Transportation Cabinet letting data.

## Table B.9
## Contractors Qualified For Asphalt Services
## 2018 To 2023

| Contractor Type | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|
| Asphalt vendors | 56 | 50 | 54 | 53 | 46 | 53 | 312 |
| Kentucky asphalt vendors | 46 | 43 | 46 | 43 | 37 | 42 | 257 |
| All registered vendors | 608 | 522 | 605 | 497 | 453 | 512 | 3,197 |

Notes: Vendor numbers were based on those qualified in the first list for July of each year. Contractors were considered to be asphalt service providers if they were qualified for C1 (Asphalt Paving Option B) or C2 (Asphalt Paving Option A) projects. Contractors were considered to be Kentucky vendors if their address was in Kentucky.
Source: Staff analysis of Kentucky Transportation Cabinet Prequalified Contractors Lists for July 24, 2018; July 8, 2019; July 2, 2020; July 1, 2021; July 1, 2022; and July 18, 2023.

## Table B.10
## Number Of Projects Won By Single Bids, By Contractor
## January 2018 To July 2023

| Contractor | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|---|
| Hinkle Contracting | 45 | 46 | 11 | 60 | 48 | 26 | 236 |
| Mountain Enterprises | 44 | 54 | 15 | 39 | 37 | 33 | 222 |
| Scotty's Contracting & Stone | 21 | 14 | 6 | 21 | 55 | 37 | 154 |
| L-M Asphalt Partners | 17 | 34 | 5 | 32 | 23 | 19 | 130 |
| Jim Smith Contracting | 14 | 9 | 9 | 15 | 24 | 18 | 89 |
| The Allen Co. | 7 | 20 | 0 | 21 | 23 | 11 | 82 |
| Mago Construction | 13 | 11 | 2 | 17 | 13 | 9 | 65 |
| Haydon Materials | 11 | 13 | 6 | 12 | 6 | 15 | 63 |
| Rogers Group | 8 | 9 | 0 | 12 | 18 | 10 | 57 |
| Gaddie-Shamrock | 8 | 9 | 3 | 10 | 6 | 13 | 49 |
| Yager Materials | 6 | 6 | 2 | 4 | 8 | 2 | 28 |
| H.G. Mays Corp. | 6 | 2 | 1 | 3 | 5 | 2 | 19 |
| Walker Construction & Materials | 0 | 3 | 1 | 6 | 5 | 3 | 18 |
| Eaton Asphalt Paving | 0 | 3 | 0 | 0 | 8 | 4 | 15 |
| Lexington Quarry | 0 | 4 | 1 | 4 | 3 | 2 | 14 |
| Nally & Gibson Georgetown | 2 | 3 | 3 | 4 | 0 | 1 | 13 |
| Murray Paving | 3 | 1 | 1 | 2 | 3 | 0 | 10 |
| The Walker Company of Kentucky | 5 | 2 | 0 | 0 | 0 | 0 | 7 |
| Rame Contracting | 0 | 0 | 0 | 1 | 2 | 0 | 3 |
| Bluegrass Contracting | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| Harper Construction | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| L-M Asphalt | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Ragle Inc. | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Reynolds Sealing and Striping | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Westate Construction | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total single-bid projects awarded | 213 | 243 | 66 | 264 | 290 | 205 | 1,281 |
| Total projects awarded | 468 | 467 | 239 | 536 | 505 | 324 | 2,539 |
| Total contractors per year | 18 | 18 | 14 | 18 | 20 | 16 | 25 |

Source: Staff analysis of Kentucky Transportation Cabinet data for winning asphalt lets.

## Table B.11
## Asphalt Plant Owners And Plants Owned, By Contractor
## July 2023

| Contractor | Plants |
|---|---|
| Hinkle Contracting | 13 |
| Scotty's Contracting And Stone | 13 |
| Mago Construction | 10 |
| Mountain Enterprises | 9 |
| The Allen Company | 6 |
| ATS | 6 |
| Eaton Asphalt Paving | 5 |
| Rogers Group | 5 |
| H.G. Mays | 3 |
| Louisville Paving | 3 |
| Roadbuilders | 3 |
| Barrett Paving | 2 |
| E & B Paving | 2 |
| Flynn Brothers | 2 |
| Gaddie Shamrock | 2 |
| Haydon Materials | 2 |
| Walker Construction | 2 |
| Charles Deweese Construction | 1 |
| Ford Construction Company | 1 |
| Hall Contracting | 1 |
| Hamilton & Hinkle | 1 |
| IMI | 1 |
| J.H. Rudolph & Company | 1 |
| Jim Smith Contracting | 1 |
| John R. Jurgensen Company | 1 |
| Libs Paving Company | 1 |
| Mac Construction & Excavating | 1 |
| Milestone Contractors | 1 |
| Miller & Sons Paving | 1 |
| Paul Michels and Sons | 1 |
| Riegler Blacktop | 1 |
| Shelbyville Asphalt | 1 |
| Wingham Paving | 1 |
| Yager Materials | 1 |
| Total | 105 |

Source: Staff analysis of Plantmix Asphalt Industry of Kentucky data and registered out-of-state bidders.

# Endnotes

[1] 603 KAR 2:015, secs. 3-5.
[2] Michael L. Riegler, president, Riegler Blacktop. Nov. 13, 2023. Interview.
[3] Ronald A. Sines, vice president of sustainability, CRH Americas, and Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky. Meeting of the Interim Joint Committee on Transportation. Frankfort, Nov. 1, 2023. Testimony.
[4] John Moore, deputy state highway engineer, and Tracy Nowaczyk, assistant state highway engineer, Kentucky Transportation Cabinet. Meeting of the Interim Joint Committee on Transportation. Frankfort, Nov. 1, 2023. Testimony.
[5] Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview; Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[6] "Asphalt Education." Plantmix Asphalt Industry of Kentucky. Nov. 14, 2023. Web.
[7] Albert Kinman, vice president, H.G. Mays Corp.; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview; Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview; Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[8] Kentucky Transportation Cabinet. "Division 400 Asphalt Pavements." *Kentucky Standard Specifications.* 2019, pp. 401-407. Web.
[9] Albert Kinman, vice president, H.G. Mays Corp.; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview; Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview; Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[10] "Construction Procurement." Kentucky Transportation Cabinet. Nov. 20, 2023. Web.
[11] KRS 176.130.
[12] KRS 176.180.
[13] Robert Lewis, acting state highway engineer, Kentucky Transportation Cabinet. "Memorandum: Certificate Of Eligibility For Unlimited Bid Capacity." Nov. 3, 2015. Web.
[14] 603 KAR 2:015, sec. 2.
[15] 603 KAR 2:015, secs. 3-5.
[16] 603 KAR: 2015, secs. 5(2) and 7.
[17] Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[18] Kentucky. Transportation Cabinet. *Construction Procurement Guidance Manual.* Dec. 10, 2018, p. 41. Web.
[19] KRS 176.100.
[20] Kentucky. Transportation Cabinet. *Construction Procurement Guidance Manual.* Dec. 10, 2018, p. 44. Web.
[21] Ibid., p. 48.
[22] Ibid., p. 49.
[23] KRS 176.080.
[24] Kentucky. Transportation Cabinet. "Division 100 General Provisions." *Kentucky Standard Specifications.* 2019, pp. 102-3, 103-1. Web.
[25] Ibid., p. 103-1.
[26] 603 KAR 2:015, sec. 4.
[27] Kentucky. Transportation Cabinet. MFS-102, MFS-204, MFS-301, and MFS-304. *Materials Field Sampling and Testing Manual.* Feb. 2, 2022. Web.
[28] Kentucky. Transportation Cabinet. "Post Construction Review Program." n.d. Web.
[29] "Audits." Kentucky Transportation Cabinet. Nov. 20, 2023. Web.
[30] Kenny Bishop, legislative director, Kentucky Transportation Cabinet. Email from Kenny Bishop to Gerald Hoppmann, Nov. 17, 2022.
[31] John Cheves. "Kentucky Attorney General Releases Statements From 1983 Highway Bid-Rigging Case." *Lexington Herald-Leader.* Jan. 9, 2014. Web.
[32] Ibid.

[33] John Cheves. "Lawson, Nighbert Not Guilty Of Charges." *Lexington Herald-Leader.* Nov. 12, 2015. Web.
[34] John Cheves. "Lawson Firms Wrongly Got Road Work, Federal Audit Says." *Lexington Herald-Leader.* Nov. 10, 2015. Web.
[35] Linda B. Blackford. "Final Bid-Rigging Case Gets Dropped." *Lexington Herald-Leader.* Dec. 9, 2013. Web; John Cheves. "Lawson, Nighbert Not Guilty Of Charges." *Lexington Herald-Leader.* Nov. 12, 2015. Web.
[36] Kenny Bishop, legislative director, Kentucky Transportation Cabinet. Email to William Spears, Sept. 18, 2023.
[37] Ibid.
[38] Ibid.
[39] Kenny Bishop, legislative director, Kentucky Transportation Cabinet. Email to William Spears, Sept. 5, 2023.
[40] Albert Kinman, vice president, H.G. Mays Corp.; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview; Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview; Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[41] Kentucky. Transportation Cabinet. "Division 400 Asphalt Pavements." *Kentucky Standard Specifications.* 2019, p. 401-7. Web.
[42] Albert Kinman, vice president, H.G. Mays Corp.; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview.
[43] Kentucky. Transportation Cabinet. "Division 400 Asphalt Pavements." *Kentucky Standard Specifications.* p. 403-3. Web.
[44] Michael L. Riegler, president, Riegler Blacktop. Nov. 13, 2023. Interview.
[45] Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[46] Albert Kinman, vice president, H.G. Mays Corp; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview.
[47] Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview.
[48] Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[49] Michael L. Riegler, president, Riegler Blacktop. Nov. 13, 2023. Interview.
[50] Albert Kinman, vice president, H.G. Mays Corp.; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview.
[51] Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview.
[52] Albert Kinman, vice president, H.G. Mays Corp.; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview.
[53] Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[54] Albert Kinman, vice president, H.G. Mays Corp.; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview; Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview; Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[55] Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview.
[56] Michael L. Riegler, president, Riegler Blacktop. Nov. 13, 2023. Interview.
[57] Albert Kinman, vice president, H.G. Mays Corp.; Brian Wood, executive director, Plantmix Asphalt Industry of Kentucky; Chad LaRue, executive director, Kentucky Association of Highway Contractors. Oct. 3, 2023. Interview.
[58] Ibid.
[59] Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.
[60] Kenny Bishop, legislative director, Kentucky Transportation Cabinet. Email to William Spears, Sept. 5, 2023.
[61] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, pp. 1-2. Web.
[62] Ibid., p. 3.
[63] 603 KAR 2:015.
[64] Ibid.; KRS 176.150.
[65] Ill. Admin. Code tit. 44, sec. 650; 105 Ind. Admin. Code 11-2-1; Mo. Rev. Stat. sec. 227.105; Ohio Admin. Code 5525; Ohio Admin. Code 5501; Tennessee. Department of Transportation. *Rules Of The Tennessee Department Of*

*Transportation.* Chapter 1680-5-3. Prequalification Of Contractors. Sept. 2006, pp. 1, 5-8; Virginia. Department of Transportation. *Rules Governing Prequalification Privileges*, pp. 2-5; W. Va. Code R. sec. 157-14-3;
[66] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, pp. 3-4.
[67] Kentucky. Transportation Cabinet. *Standard Specifications For Road And Bridge Construction. Edition Of 2019.* June 1, 2019, pp. 24-25.
[68] Missouri. Department of Transportation. *Missouri Standard Specifications For Highway Construction.* Oct. 2023, p. 31; West Virginia. Department of Transportation. Division of Highways. *Standard Specifications. Roads And Bridges. 2023 Edition*, p. 24; Kentucky. Transportation Cabinet. *Standard Specifications For Road And Bridge Construction. Edition of 2019.* June 1, 2019, pp. 24-25; 105 Ind. Admin. Code 11-3-16.
[69] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, p. 4.
[70] Kentucky. Transportation Cabinet. *Construction Procurement Guidance Manual.* Dec. 2018, pp. 44-45.
[71] Kenny Bishop, legislative director, Office of Public Affairs; Rachel Mills, director, John Moore, deputy state highway engineer, and James Ballinger, state highway engineer, Department of Highways; Michael Hancock, deputy secretary, Office of the Secretary; Will Fogle, executive director, Office of Legal Services; Randall Rover, executive director, Office of Audits. Kentucky Transportation Cabinet. Nov. 3, 2022. Interview.
[72] Charles Ragdale, engineer of project coordination and implementation, Illinois Department of Transportation. Nov. 2, 2023. Interview.
[73] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, p. 4. Web.
[74] Ibid., p. 5.
[75] Kentucky. Transportation Cabinet. *Construction Procurement Guidance Manual.* Dec. 2018, pp. 52 and 59. Web.
[76] Ibid., p. 56.
[77] Kentucky. Transportation Cabinet. Minutes of Awards Meeting. Feb. 3, 2020. Web; Kentucky. Transportation Cabinet. Department of Highways. Bid Tab Award Sheet For Letting. 20-4201. Web.
[78] Kenny Bishop, legislative director, Kentucky Transportation Cabinet. Email to William Spears, Nov. 29, 2023.
[79] Kentucky. Transportation Cabinet. *Standard Specifications For Road And Bridge Construction. Edition Of 2019.* June 1, 2019, p. 24. Web.
[80] Kenny Bishop, legislative director, Kentucky Transportation Cabinet. Email to William Spears, Sept. 18, 2023.
[81] US. Federal Highway Administration, Department of Transportation. *National Review Of State Cost Estimation Practice.* Feb. 2015, p. 21. Web.
[82] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, p. 5. Web.
[83] Kentucky. Transportation Cabinet. *Construction Procurement Guidance Manual.* Dec. 2018, p. 48. Web.
[84] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, pp. 8-9. Web.
[85] Kentucky. Transportation Cabinet. *Construction Procurement Guidance Manual.* Dec. 2018, p. 48. Web.
[86] Kenny Bishop, legislative director, Office of Public Affairs; Rachel Mills, director, John Moore, deputy state highway engineer, and James Ballinger, state highway engineer, Department of Highways; Michael Hancock, deputy secretary, Office of the Secretary; Will Fogle, executive director, Office of Legal Services; Randall Rover, executive director, Office of Audits. Kentucky Transportation Cabinet. Nov. 3, 2022. Interview.
[87] Mike Law, president, and Rod England, executive vice president and chief financial officer, Scotty's Contracting & Stone. Oct. 26, 2023. Interview; Shawn Ray, senior vice president and general manager, Mountain Enterprises. October 27, 2023. Interview.
[88] Kentucky. Transportation Cabinet. *Construction Procurement Guidance Manual.* Dec. 2018, p. 49. Web.
[89] Kenny Bishop, legislative director, Kentucky Transportation Cabinet. Email to William Spears, Sept. 5, 2023.
[90] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, pp. 11-12. Web.
[91] Ibid., pp. 12-13.
[92] Ibid., p. 13.
[93] Ibid., p. 14.
[94] Kentucky. Transportation Cabinet. *Construction Procurement Guidance Manual.* Dec. 2018, pp. 54 and 56. Web.
[95] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, p. 13. Web.
[96] Shawn Ray, senior vice president and general manager, Mountain Enterprises. Oct. 27, 2023. Interview.

[97] US. Federal Highway Administration. *Guidelines On Preparing Engineer's Estimate, Bid Reviews And Evaluation*. Oct. 7, 2021, p. 14. Web.
[98] Ibid., p. 15.